DOCUMENT RESUME

ED 070 963 AC 014 139

AUTHOR	Sanders, Harry C.
TITLE	Instruction in the Cooperative Extension Service.
INSTITUTION	Louisiana State Univ., Baton Rouge. Cooperative Extension Service.
SPONS AGENCY	Department of Agriculture, Washington, D.C.
PUB DATE	Feb 72
NOTE	152p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	Adult Students; *Behavioral Objectives; Books; *Curriculum Design; Educational Objectives; *Extension Agents; Instructional Materials; *Professional Training; Program Evaluation; Program Planning; Student Evaluation; *Teaching Techniques

ABSTRACT

The following six ideas relating to the work of the Cooperative Extension Service are presented: (1) Giving instruction is the Service's major function; (2) Tyler's curriculum and instruction principles are a good guide in developing the instructional function of the organization; (3) Instruction is the principle tool used in influencing behavior of other Extension personnel; (4) Service instruction principles are applicable to the work of all personnel who instruct their clientele; (5) Instruction is conducted to influence overt behavior of clientele; and (6) Service personnel need breadth and depth of training. Chapter I presents the legal base for declaring instruction to be the Service's primary function. Chapter II presents a concept of Extension objectives. Chapter III outlines a procedure for selecting objectives. Chapter IV presents some of the learning experiences used by the Extension. Chapter V presents criteria for organizing learning experiences for effective instruction. Chapter VI is a discussion of necessary materials and services which must be available to clientele for success in instruction. Chapters VII, VIII, and IX are devoted to evaluation, organization, and application of the theoretical concept, respectively. Chapter X presents a brief discussion of the areas of knowledge required for good extension instruction. (Author/CK)

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ED 070963

Instruction in the Cooperative Extension Service

H. C. Sanders

LSU Cooperative Extension Service

ED 070963

INSTRUCTION
in the
COOPERATIVE EXTENSION SERVICE

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Director Emeritus
Louisiana Cooperative Extension Service

LOUISIANA STATE UNIVERSITY
and
AGRICULTURAL AND MECHANICAL COLLEGE

Cooperative Extension Service
JOHN A. COX, *Director*

In cooperation with the United States Department of Agriculture. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

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After his retirement as Director Emeritus, he served for several years as Associate Professor of Extension Education at Louisiana State University. He was senior editor of *The Cooperative Extension Service*, a "working handbook" for Extension personnel, published by Prentice-Hall, Inc., in 1965.

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February 1972

INTRODUCTION

This book presents six ideas relating to the work of the Cooperative Extension Service. They are:

1. Giving instruction is the major function of the Cooperative Extension Service.
2. The principles of curriculum and instruction presented by Dr. Ralph W. Tyler must be adapted when applying them to the the Cooperative Extension Service, but when adapted they are a good guide in developing the instructional function of the organization.
3. Instruction is the principle tool used by Extension personnel in influencing the behavior of other Extension personnel.
4. The principles of instruction developed for the Cooperative Extension Service are applicable to the work of all personnel who use instruction to influence the behavior of their clientele.
5. Instruction is conducted for the purpose of influencing the overt behavior of clientele.
6. Personnel of the Cooperative Extension Service, to be most effective, need both breadth and depth of training.

Chapter I presents the legal base for declaring instruction to be the primary function of the Cooperative Extension Service. However, since instruction in Extension is not an academic exercise conducted in isolation, other major activities of the organization are discussed briefly.

Chapter II presents a concept of Extension objectives and a discussion of objectives that influence Extension.

Chapter III outlines a procedure for selecting objectives.

Chapter IV presents some of the number of learning experiences used by Extension. In addition the most important factors which influence their selection are discussed briefly.

Chapter V presents criteria for organizing learning experiences for effective instruction.

Chapter VI is a discussion of necessary materials and services which must be available to clientele for success in instruction and what Extension may do to assure their availability.

Chapter VII is devoted to evaluation which should be practiced at every step in the process.

Chapter VIII is devoted to the organizing structure.

Chapter IX contains a step-by-step application of the theoretical concept.

Chapter X presents a brief discussion of the areas of knowledge required for good Extension instruction and ways in which this knowledge may be acquired.

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Chapter 1

THE SETTING

Section Two of the Smith-Lever Act begins: "Agricultural Extension work shall consist of the giving of instruction . . ." Thus, giving instruction is the major function of the Cooperative Extension Service.

To use chemical terms metaphorically, instruction is not an element but a compound. Tyler suggests that there are four questions that must be considered in developing *any curriculum or plan of instruction*. They are:

(1) What educational purposes should the school seek to attain?
(2) What educational experiences can be provided that are likely to attain these purposes?
(3) How can these educational experiences be efficiently organized?
(4) How can we determine whether these purposes are being attained?[1]

Bruner, however, maintains that liberal adult education is distinctive and requires special treatment:

> Liberal adult education itself is a huge field. It encompasses most of the areas of knowledge. It is largely conducted on a voluntary basis with none of the compulsions for formalized education in school or college. It lacks the economic incentive of vocational education. Its participants have many motives but their consistent pursuit of learning, through whatever avenues and agencies of adult education they have chosen, is largely determined by personal values and satisfactions. Adult educators therefore face problems in gaining and holding their constituents unlike those of other educational workers. From this has sprung a basic tenet in adult education philosophy: That the participant must be offered what he wants.
>
> From this situation also has come the need for research differing sharply in character from that which services the public school or other formalized educational enterprises. For nonvocational adult education, with few exceptions, has no entrance requirement save interest, no homogeneous groupings, no grades and no grading, no graduation, no diplomas or degrees. It is available from no single recognized and accredited agency like the school but rather from hundreds of agencies and institutions which differ widely in character, support, and objectives.[2]

The uniqueness of the Cooperative Extension Service has been described in these words:

> Extension is educational but differs greatly from the common concept of an educational institution.
>
> 1. It has no fixed curriculum or course of study.
> 2. It confers no degrees and gives no diplomas.
> 3. It operates informally off campus and uses farms, homes, and places of business as classrooms.
> 4. The Extension teacher has a large and heterogeneous audience.
> 5. The Extension teacher has a large field of subject matter.
> 6. Subject matter as used by the Extension teacher is more practical than theoretical and is intended for immediate application in the solution of problems.
> 7. Application of the subject matter requires a change of mental and physical behavior.[3]

Therefore, because of its distinctive character the instructional function of Extension is composed of five elements:

1. The selection of objectives (See Chapters 2 and 3).
2. The selection of learning experiences (See Chapter 4).
3. The organization of learning experiences (See Chapters 5 and 8).
4. The arrangement for the availability of resources to clientele (See Chapter 6).
5. The evaluation of plans, processes, learning experiences and results and adjusting operations accordingly (See Chapter 7).

No one of these activities is carried out independently. They act upon, react with, and are modified by each other. The nature of the objectives influences the nature of the learning experiences that should be selected. The objectives influence the selection of resources necessary for reaching them. Evaluation should be continual so that it may be possible to determine the correctness or the error of the determined course of action.

There also is continuous action. The Extension worker does not stop all effort and select objectives, then move through to the other elements and work exclu-

sively on each element at the time. The Extension worker should engage annually in activities which make up each of these elements.

Three processes used by Extension workers are applicable to each of the five elements. They are planning, execution, and evaluation. Each element must be planned and must be planned carefully, not on the spur of the moment with little or no consideration of the situation. It must be executed, and it can be executed poorly or well. It must be evaluated, both for performance and effectiveness, and it may be evaluated scientifically or carelessly.

FIGURE 1—The elements of the instructional FUNCTION and the PROCESSES used by Extension. The circles denote continuous action. The arrows pointing in opposite directions denote interaction and influence each on and with the others.

APPLICABILITY OF THE PROCESS

The instructional process as described here is applicable to the work of *all Extension personnel where education is the approach used to influence behavior.* It is applicable to personnel who instruct lay clientele. It is also applicable to the work of executives, supervisors, and staff members who depend upon the authority of knowledge to influence the behavior of the personnel they are responsible for leading.

In the Cooperative Extension Service there are several sources of authority. There are the authorities of law and administrative regulations based on the law. There is the authority of position. There is the authority of knowledge. Because of physical decentralization, administrative decentralization is a necessity. Therefore, personnel in the Cooperative Extension Service cannot be coerced administratively into doing a better job. They will improve performance as they learn. They can be taught through the process of instruction herein described.

Instruction in the Cooperative Extension Service is thus both an end and a means to an end. The instruction of persons not enrolled in college is the first function, the end product of the organization. Instruction is also a means to that end. Through instruction, personnel are trained to be more effective in the instruction of their clientele.[4]

Instruction in Extension, however, does not take place in isolation. It is conducted as one—the major one—of the many necessary activities of the organization. It is well, therefore, to consider briefly other functions for which the organization is responsible.

REPORTING

The Smith-Lever Act, as amended, provides that reports shall be made. Extension workers always have made reports. A system of reporting was developed and put in use when the Cooperative Extension Service was established. There was criticism of the system and periodically it was revised. A brief description of

the reports required and the revisions made is presented by Welsh and Raudabaugh. In addition, they present some guidelines for a reporting system.[5] In following these guidelines three questions should be considered:

1. What reports does the law require?
2. What reports will be valuable to the person who prepares them?
3. What reports are needed for supervision and administration?

A synthesis of the answers to these questions, following the guidelines, should identify the reports that are necessary and will be of value.

ORGANIZATIONAL MAINTENANCE

To conduct a large educational program requires an organization. That organization must maintain itself.

The activities necessary for maintaining the Extension organization are:

1. Administrative planning
2. Organizing
3. Financing
4. Staffing
5. Operating

A brief discussion of each of these, in the order listed, follows.

Administrative Planning

Administrative planning involves an inventory and a projection for each position and each administrative unit. This inventory and projection should cover clientele, actual and potential; the needs of clientele; personnel; and policies and procedures.

Regularly at stated intervals, or as the situation suggests, every Extension worker should ask himself a number of questions. Among them are: What is my job? Whom am I serving? Whom should I be serving? Does my program fit the needs of those I am trying to serve? If not, why? Are there policies or procedures

which hamper me in my work? Am I adequately trained to perform the work I am supposed to do? If not, why? The answers to these questions should influence action.

In addition, the worker should look ahead. What will the situation be ten years from now? Who will be my primary clientele then? What will be their needs? How can I prepare to fill those needs? The answers to those questions also should guide and stimulate action.

The leader of each administrative unit should follow this same procedure and ask similar questions about the work and personnel of the unit as a whole. Some of the personnel of the unit should be involved in this overall inventory. In considering programs the head of the unit should consider clientele, those served, and those not served. He should consider the adequacy of personnel or the possibility of overstaffing. He should consider policies and procedures carefully to determine the need for them and their effect on efficiency and personnel satisfaction.

The forward look is doubly important for the head of a unit, and the larger the unit the more urgent the need for this projection. Usually the major considerations, conclusions, and recommendations should be written, reviewed, and filed for reference in program development.

The chief executive should assume leadership for and set the example in this activity.

Organizing

Organizing the work and workers is a continuing activity in the Cooperative Extension Service.

> The administrative process of *organizing* an enterprise or any of its parts consists of (1) dividing and grouping the work that should be done (including administration) into individual jobs, and, (2) defining the established relationships between individuals filling those jobs.[6]

We are thinking here about the formal structure and relationships that should be established. Personnel will develop informal ways of working and associating

which must be recognized in operations.

The formal structure of an Extension organization is based on several factors. Included are (*a*) the clientele and their needs, (*b*) training and philosophy of executives, (*c*) history, (*d*) institutional policy, (*e*) geographic distribution of personnel, (*f*) number of personnel and (*g*) quality and training of personnel.

The formal structure of an organization is not fixed. It should be examined annually and revised as needed. Probably there should be two plans for such a structure. One would picture the ideal, the goal toward which one is striving. The second would be the actual; funds or personnel often are not available to meet the ideal.

Financing

Financing Extension work requires continuing and extensive activity. Normally Extension has three basic sources of funds: federal, state, and local. Federal funds may be directly appropriated under the basic acts, appropriated for specific work upon request or reallocated from another department or agency. State funds may be appropriated directly or through the college or university. Funds may be secured from the county, city, or in a few cases town or township governments. County school boards appropriate funds to Extension in at least one state.

A small amount of funds is obtained in the states from nonpublic sources.

The many activities necessary in financing include deciding on which of these sources to utilize and what amounts and for what purposes funds will be requested from each. These requests must be presented and justified. When the funds are appropriated or allocated they must be budgeted to areas of work, positions, materials, etc.

Staffing

Staffing, the fourth element, includes activities re-

lating to personnel, such as recruiting, employing, inducting, orienting, training, supervising, and discharging or retiring personnel. Funds spent for personnel constitute by far the largest expenditure of the Cooperative Extension Service. In addition, the quality of personnel is a large factor in determining the success of the organization. Therefore, staffing is a major activity of supreme importance.

Operating

Under "operating" I have grouped several types of activities which other writers consider major divisions. Included are (*a*) the development and maintenance of a business office, (*b*) considering and preparing policies and orders, (*c*) communications and (*d*) public relations.

The character and work of the business office of a state organization will be determined partly by the extent to which the Cooperative Extension Service has been integrated into the college or university of which it is a part. In a few states, the Extension Service has received and dispersed funds, performing all work necessary thereto. In others the parent institution has performed this task. In all cases, however, the director will desire to have running accounts kept so that he can have the financial situation quickly determined.

All states will need forms and they must be processed. These forms include, among others, applications for employment, recommendations for appointment, payroll, expense accounts, and requests for purchase. While so called *paper work* may be reduced to a minimum, a considerable amount is necessary in any organization such as a state unit of the Extension Service.

Policies must be considered and orders prepared. The Cooperative Extension Service is fortunate in that the basic national law is stated in broad terms. There are few specific directives and few prohibitions. This freedom usually is extended throughout all administrative units. However, good administration does re-

quire a few policies and some definite procedures to facilitate operations.

Generally morale will be increased if personnel are involved in the development of policies and procedures which affect them. The increase in time and effort required for this approach will be richly rewarded.

Communications is a time-consuming but necessary activity. Since the Cooperative Extension Service is geographically dispersed and administratively decentralized it is difficult to keep the personnel informed. Lines of communication should be provided to channel up, down, and through the organization. Among the methods used are house organs, regular letters, special letters, staff meetings, and face-to-face conferences. Committees may also serve as a communication device in addition to other functions.

Public relations is the synthesized reaction of all the persons contacted directly or indirectly by all Extension personnel. Therefore, public relations cannot be assigned as the major work of an individual or group in the organization and forgotten by the staff as a whole. Actually public relations is everybody's business. Therefore, there should be a "watchdog" type of committee regularly examining every activity of the organization for its public relation impact, good or bad, because public relations can be bad as well as good.

The Cooperative Extension Service has four major avenues of developing good public relations. Its personnel *practice* good public relations when they live and work as good citizens in the communities where they reside; *serve* the public or at least part of it educationally;[7] *involve* some of the public in the development and execution of the program; and *inform* another segment, if not all of the public, of Extension's character, activities, and accomplishments.

All of these activities must be skillfully executed by competent personnel in a manner to fit the occasion. Therefore, every type of action of every Extension person should be examined periodically for its significance in public relations.

The elements in organizational maintenance constantly react with and influence each other. The kind and quality of personnel influences the structure of the organization. The finances available determine the number and quality of personnel that can be employed. Operating procedures affect morale. These are but a few of the many interrelationships that exist. The processes of planning, execution, and evaluation also are applicable to these elements. There is also continuous consideration of and work with them.

FIGURE 2—Elements of the function MAINTAINING THE ORGANIZATION AND THE PROCESSES used by Extension. The circles denote continuous action. The arrows pointing in opposite directions denote interaction and influence each on and with the others.

SUMMARY

Thus we find instruction, the major function of the Cooperative Extension Service, conducted as one of many activities. Often these other activities have been dominant, possibly because of a lack of understanding of how the instructional function should be organized and conducted. We will now discuss the elements of instruction, the practice of which will enable Extension personnel to teach more effectively.

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Chapter 2

EXTENSION OBJECTIVES

Before discussing an approach to the selection of objectives, it is advisable to present the writer's definition of an objective, a brief statement of their importance, and a description of objectives important to Extension.

Some authorities differentiate between the word "objective" and its synonyms. There possibly are different shades of meaning. Here, however, "objective," aim, goal, end, and purpose are considered interchangeable. The writer likes the definition: *An objective is something one expects to accomplish.* This definition avoids the use of the synonyms, which is desirable.

Objectives are important in Extension work. Objectives give direction to the activities of any organization. Rarely does one reach a goal unless he knows where he is going and directs his activity to that end. According to Raudabaugh, "Goals and objectives indicate what people are trying to accomplish; they identify the target toward which the action program is oriented."[1] Therefore, objectives should be developed before any action is undertaken.

Properly developed objectives give impetus to Extension workers. They stimulate action.

The Cooperative Extension Service develops and uses *general* and *program* objectives.

GENERAL OBJECTIVES

Through the years, individuals and groups of Extension workers have developed statements which helped them to clarify their own thinking about Extension and which were useful in developing an understanding of the organization by new Extension workers and by the public. Kelsey and Hearne[2] call these "general objectives." They have been developed nationally for all Extension work, and separately for agriculture, 4-H Club and home demonstration work. They have been

developed by some states and some counties, and by some subject matter areas. These statements of general objectives reflect conditions and concepts which prevailed at the time they were made.

Among the better known and more frequently quoted statements of general objectives for Extension work nationally are those presented by Smith and Wilson[3] and those developed by a committee of Extension administrators at Madison, Wisconsin, in 1946.[4]

General objectives for home demonstration work were developed in 1938 by a committee studying home demonstration work,[5] and by state home demonstration leaders in 1946 and again in 1953.[6]

General objectives for 4-H Club work were developed in 1935[7] and during World War II.[8]

A later system of general objectives for all of Extension, including home demonstration and 4-H Club work, was developed in 1958 and 1959. In 1958, a committee of Extension workers developed a statement entitled *The Cooperative Extension Service Today—A Statement of Scope and Responsibility*, often referred to as the "Scope Report." It included a statement of general objectives and recommended that nine program areas receive continuous and concentrated attention.

Throughout 1959, committees of Extension workers studied Extension's responsibility in these program areas. In 1960, in a bulletin entitled *A Guide to Extension Programs of the Future*, general objectives for these areas were presented. For the first time, general objectives were developed for the field of agriculture, among others. The statements present an excellent picture of the breadth and depth of the Extension program as envisioned by the committees and as generally accepted by Extension workers in the United States at that time.

A few examples will illustrate their character and value.

The Scope Report gives these general objectives for all Extension work in the United States:

> "In performing this function, the Extension Service has always held high those objectives which help people attain:

Greater ability in maintaining more efficient farms and better homes.

Greater ability in acquiring higher incomes and levels of living on a continuing basis.

Increased competency and willingness, by both adults and youth, to assume leadership and citizenship responsibilities.

Increased ability and willingness to undertake organized group action when such will contribute effectively to improving their welfare."[9]

These general objectives were developed by the Ohio Extension Service (somewhat condensed):

1. Interpret the findings of research and encourage the application of those findings in agriculture.
2. Assist people in solving their problems through group action.
3. Promote understanding of economic and social changes affecting Ohio people.
4. Encourage improvement of family living, rural housing, and family diets.
5. Develop a program of technical information, recreation, citizenship training, leadership, and community living with the youth of Ohio through 4-H and older youth organizations.
6. Counsel with farmers and homemakers on farm and home problems.
7. Mobilize rural people to meet emergencies.
8. Cooperate with federal, state, and county governments.
9. Aid in the esthetic and cultural growth of farm people.
10. Contribute to urban life.
11. Develop rural leadership.[10]

In 1962, the author wrote the director of Extension in all states and territories of the United States asking for copies of general objectives for each state as a whole and for counties for all of Extension work, for home economics work, and for 4-H Club work. No statement of general objectives for all of Extension work in a county was received. I am, therefore, using a 1925 statement of general objectives of a county agent, with which I am familiar:

1. To establish Extension work on a permanent basis.
2. To raise the net income of farmers.
3. To raise the level of living of farm families.

Copies of general objectives for home economics work nationally, for Minnesota, and for Onondaga County, New York, are included in the appendix.

Copies of general objectives for 4-H Club work nationally, prepared in 1960, for New Jersey, prepared in 1962, and for Niagara County, New York, prepared in 1962, are also included in the appendix.

These statements of objectives are not included as perfect examples. They do illustrate what some national and state groups and agents in some counties have done, and they do indicate the value which can accrue from their development and use.

PROGRAM OBJECTIVES

There are three kinds of program objectives: (a) Organizational, which describe the overt behavior expected to result from the instruction; (b) Personal, which describe the activities of the Extension Worker designed to influence clientele and those designed to improve his performance; and (c) Teaching, which describe the purpose of each instructional activity.

Organizational Objectives

Before an Extension worker begins his program of instruction, he must decide whom he is going to instruct and what he is going to teach. These two decisions are the basis for developing working objectives for the Extension program. Such program objectives are developed by individuals and groups; for national, state, district, and local geographic areas; and for subject matter areas such as clothing, nutrition, dairying, and beef cattle. They may be long-time goals for five years or more; intermediate goals for less than five but more than one year; or short-time goals for one year or less. Program objectives become more specific for the smaller geographic areas and in smaller segments of subject matter.

For example, the livestock specialists in Georgia developed these long-time program objectives:

> The goal of Georgia's livestock program is two-fold—to increase numbers and to improve quality.
>
> In order to bring about these changes the producer and our College of Agriculture team must work together for greater efficiency in:

Better Breeding—Accurate selection and culling through performance testing.

Better Feeding—Sound pasture management with fattening rations consisting of a maximum of roughage and a minimum of grain adequately supplemented with protein, minerals, vitamins, and feed additives of proven value.

Better Management—Improved husbandry and disease control with efficient feed and livestock handling equipment.

Better Marketing—Planned marketing on the basis of quality.[11]

These long-time program objectives grew out of the general objectives of a county agent in 1925:

I. To establish Extension work on a permanent basis.
   - A. Secure an appropriation of $900 from the school board.
   - B. Secure and equip an office.

II. To raise the net income of farmers.
   - A. By buying fertilizer, feed, seed, and insecticides cooperatively.
   - B. By selling cotton cooperatively.
   - C. Through an increase in the yield and the improvement of the quality of cotton.
   - D. By including livestock and poultry as enterprises.
   - E. By growing more feed through increasing the yield of corn and the use of soybeans for hay.
   - F. By improving the production and sale of forest products.

III. To raise the level of living of farm families.
   - A. Secure a local appropriation for a home demonstration agent.
   - B. Increase the production of food by farm families.
   - C. Increase the conservation of food by farm families through the use of the automatic sealer and pressure cooker.

The development of intermediate and short-time program objectives enables the worker to separate clientele or subject, one or both, into units manageable for instruction.

Personal Objectives

Extension workers who are engaged in instruction plan activities which they hope will influence the overt behavior of their clientele. To conduct these activities becomes a personal objective of the worker for the calendar period covered by the program. Each of those activities designed to give information should be conducted for a definite purpose. That purpose automatically becomes a teaching objective.

Every Extension worker should plan to improve his performance each year. Objectives established for this purpose become an integral part of the program. Examples would include the objective of increasing technical knowledge in a specific field, improving the intellectual skills necessary in providing a learning experience, establishing a regularly scheduled TV program and other actions of this kind.

An Example: General Objective to Teaching Objective

Other objectives work out of a general objective in this way: (1) general objective—for the families of Rolling Hills County to be clothed appropriately, attractively and within the means available; (2) long-time objective—for the women of Rolling Hills County to make their clothing construction program more effective; (3) intermediate objective—for women of Rolling Hills County to do more quality clothing construction at home as a means of saving money; (4) short-time objective—for the women of Rolling Hills County to learn and practice basic clothing construction methods that will produce garments that fit, give a good appearance, and are durable; (5) teaching objective—for the women who are not Home Demonstration Club members in the Far Away community to learn how to set in sleeves at a demonstration in the home of Mrs. Joe Jones, on Friday, May 17, at 2 p.m.

OBJECTIVES WHICH INFLUENCE

In addition to general and program objectives developed and used by Extension, the organization is influenced by the objectives of the nation, objectives included in legislation and the objectives of their clientele. Personnel should be familiar with them.

Ultimate National Objectives

Every nation has objectives. The objectives of a democratic nation relate to maintaining national integrity and a stable government; to the mental, physical, spiritual, and moral development, health, happiness and wellbeing of the people, and to the development and wise use of natural resources. The objectives of the nation express the concept of what is considered "good." An example is the objective developed by the Joint Committee on Extension Programs, Policies, and Goals in 1948:

> Efforts for more efficient farms, better homes, higher incomes and standards of living, increasing the technical knowledge of rural people—adult and youth alike—continue to form the basic core of Extension work today. The primary interests of rural people continue to warrant emphasis on such immediate objectives. But in more recent years there has been a growing appreciation that these objectives are only integral parts of a broader and more fundamental objective. That objective—as was indicated in the previous chapters—is the development of people themselves to the end that they, through their own initiative, may effectively identify and solve the various problems directly affecting their welfare.
>
> Extension workers quite generally express this objective in terms of helping people to help themselves or helping people to attain, through their own initiative, a richer and more satisfying standard of living. These various expressions of the objectives of Extension work clearly identify the function of Extension as education. It is not education in the abstract, but education of a specific kind which will enable those served better to cope with the various problems encountered from day to day which affect their welfare.[12]

Objectives of this type are held by Extension in common with all educational institutions. Notice the similarity with the following, developed by the Educational Policies Commission of the National Educa-

tional Association of the United States and the American Association of School Administrators:

> In any democracy education is closely bound to the wishes of the people, but the strength of this bond in America has been unique. The American people have traditionally regarded education as a means for improving themselves and their society. Whenever an objective has been judged desirable for the individual or the society, it has tended to be accepted as a valid concern of the school. The American commitment to the free society—to individual dignity, to personal liberty, to equality of opportunity—has set the frame in which the American school grew. The basic American value, respect for the individual, has led to one of the major charges which the American people have placed on their schools: to foster that development of individual capacities which will enable each human being to become the best person he is capable of becoming.[13]

Legal Objectives

The Cooperative Extension Service is an agency of government based on law. In the Smith-Lever Act, as amended in 1962, Congress stated two objectives: (a) to aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of the same and (b) to assist economically disadvantaged areas in developing job opportunities so as to provide full employment. Therefore, the use of federal funds appropriated under that act must be limited to these objectives.

Objectives of Clientele

In a republic, there is a large area of personal choice left to the individual. People generally do what they want to do. Psychologists tell us that an objective is the first element in the behavioral complex. It is therefore supremely important that Extension workers realize that they must learn and understand the objectives of the clientele whom they serve. If there are areas of need not felt by clientele, it is the responsibility of Extension to create an awareness of those needs so that objectives will arise.

SOME DESIRABLE CHARACTERISTICS OF OBJECTIVES

Objectives should always be meaningful to the person who develops them and who will use them. They should always be worthwhile or significant to the person who makes them and the people toward whom they are focused. They should be large enough to be challenging. Program objectives should be attainable within the foreseeable future.

A major portion of the program objectives, but not necessarily all, should be developed with, and be acceptable to, the clientele toward whom they are directed.

Objectives must be attainable through the Extension educational process. They must be within Extension's scope, responsibility and legal authority.

Wording and Form for Objectives

The wording and form of an objective will depend on the kind. Two principles should be kept in mind in stating Extension objectives. They should be stated simply and concisely and expressed in terms that are subject to evaluation.

Making Applicability Clear

Because of the variety of objectives in Extension, it is desirable to speak specifically about them. The applicability of the objectives being discussed should always be made clear. The necessity for specifically stating this applicability is illustrated by an example of objectives included. The general and long-time program objectives of the county agent of 1925, cited earlier, were applicable only to that county. Every adjoining county had the necessary appropriations for a county agent, all had offices with some equipment and all but one had a home demonstration agent. In addition, those objectives were applicable only in

1925. Therefore, when referring to objectives, the time, place, and subject designation should be set forth explicitly.

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Chapter 3

THE SELECTION OF OBJECTIVES

The selection of objectives enables an Extension worker to make three important decisions on: (a) the clientele he proposes to teach, (b) the behavior he expects of them as a result of the instruction, and (c) the subject matter necessary to produce that behavior.

No county agent can service educationally at one time a thousand farmers with five major and ten minor enterprises. Nor can he generally serve those engaged in any major enterprise with all the subject matter needed at any one time. A home economics agent cannot service educationally *all* of the homemakers in the average county at one time.

For instructional purposes homemakers must be divided into categories, such as rural and urban, organized and unorganized, mothers with young children, teenagers, or adults only. In addition, income levels and ethnic differences must be taken into consideration. For purposes of bringing clientele together in manageable, teachable groups it may also be necessary that the home economics agent consider their primary interest at a particular time.

It should be pointed out here that the clientele served by each rank in the Cooperative Extension Service is distinctive. Clientele of county personnel are generally rural men, women, boys, and girls, and representatives of assemblers, processors, and distributors of agricultural products. A few county workers serve primarily consumers. Personnel in state offices and the Federal Extension Service may have some clientele from those groups, but more often they have a clientele primarily of other Extension workers. Therefore, objectives in the Cooperative Extension Service are distinctive for each rank (or level of position) in the Federal Extension Service, the state organization, or the county group. Objectives should, in all cases, be based on the situation of the clientele on whom they are focused and of the person who develops them.

Tyler[1] suggests three sources of information that may be used in determining objectives. They are: the learners themselves, contemporary life outside the school, and subject specialists. Extension objectives have a better chance of being so constituted that they stimulate and guide actions to desirable ends if this process is used in their selection: (a) they are based on the facts of the situation, (b) the clientele are involved in their selection, (c) needs are determined, (d) each problem growing out of a need is examined to determine why it exists, what is necessary for its solution, and alternative approaches, (e) resource persons are used as advisors, and (f) the objectives are screened. Each of these criteria will be discussed briefly.

THE SITUATION

There are four major problems involved in using the facts of the situation in selecting objectives. They are: (1) deciding what facts should be obtained; (2) determining the best sources of this information; (3) obtaining the desired information; and (4) analyzing, interpreting, and preparing the data for presentation. Each will be discussed in the following pages.

Kinds of Facts

The kinds of information to be secured will depend on the area of concern or responsibility of the person making the study. A person working toward resource development through industrialization will be interested, along with other items, in the kind and quality of the labor force available, natural resources, power, and transportation facilities. A supervisor will need information on the personnel (training and competencies) and the programs and performance of those he supervises. The subject matter specialist should examine the county situation and the agents' programs and performance in his subject area. Basically, however, the people themselves (the potential learners) and the

society of which they are a part should be examined. For example, county agricultural personnel should examine: (a) the people themselves, (b) their social institutions, (c) their economic resources, and institutions, (d) resources of the Cooperative Extension Service, (e) practices followed in agriculture, and related subjects, (f) other resources, public and private. These are discussed briefly, in order:

The People Themselves. Concerning the people, it is desirable to know their place of residence; occupation; age; sex; marital status; amount of formal education; race; ethnic origin; and system of values.

Social Institutions. Of great significance are: the kinds of families and family life prevalent; types of schools, churches, communities, organizations (formal and informal), and their influence on the people. The pattern of leadership is of great significance.

Economic Resources and Institutions. Income, both numerical and relative position in the total population, should be determined. A knowledge of land and water is essential. This knowledge should include the quantity, quality, ownership and availability for agricultural purposes. Other physical resources of an economic nature include buildings, machinery, livestock, feed, and fertilizer. Here again, kinds, quality, and ownership are of great importance to agriculture.

The supply of capital and credit, including terms and conditions of availability, should be determined.

Institutions for furnishing supplies for all purposes related to agriculture should be identified. It is necessary to know the marketing institutions and processes and the transportation and communications facilities that are available.

Resources of the Cooperative Extension Service. These resources include the personnel available, their training and ability; the reputation of the organization; the status of Extension organizations such as 4-H and Home Demonstration Clubs; and the system of lay leadership.

Practices Followed in Agriculture and Related Subjects. An examination of the practices followed will point up deviations which indicate problems. Practices make up behavior, which in many cases results in problems. Generally, problems cannot be solved and satisfaction produced until practices are changed.

Other Resources—Public and Private. Public economic programs of the nation and the state should be examined and recorded. These would include such programs and agencies as the Market News Service, the Agricultural Stabilization and Conservation Service, the Rural Development Program, and Soil Conservation Districts.

Programs of private agricultural organizations such as those of banks, chambers of commerce, utilities, and other groups that could make a contribution to the welfare of the people involved should be determined.

Sources of Information

There are many sources of information available to personnel of the Cooperative Extension Service. Basically, personnel have depended upon census data for information in the counties and on reports of research. Much information often can be obtained from state and local agencies of government, and from businesses and trade organizations and publications.

Obtaining Desired Information

In obtaining information, all of these sources must be examined. Personnel generally will find after this examination that they do not have the precise information concerning the behavior of their clientele that is needed for best judgments in program development. They should initiate studies of their clientele and their situation in order to obtain information which will be applicable and accurate. These studies will form a bench mark from which progress can be measured. They can serve also as the basis for reports of progress.

Analyzing and Interpreting Data

Analyzing, interpreting and preparing data for presentation to committees is a task requiring considerable knowledge and intellectual skill. A knowledge of statistics is almost essential. Otherwise, the worker must have available someone to guide him in this process.

INVOLVING CLIENTELE

There are several advantages to the involvement of clientele in the selection of objectives. Pesson presents three:

> Three basic premises underlie the concept of advisory groups. First, the involvement of representative lay people in the planning process will speed up the process of educational change among people. By careful selection and involvement of lay participants in planning committees, Extension multiplies the teaching effectiveness of its personnel through the indirect spread of ideas and innovations. Second, the involvement of representative lay people will result in 'better' decisions when compared with those made by the professional staff alone. The central idea involved is that people, when provided with the real facts of the situation, and with good leadership, will identify the more critical problems with which they are faced. Third, the involvement of the individual in planning activities is a beneficial learning experience.[2]

In addition, *only the clientele can determine acceptable standards of performance.*

The Cooperative Extension Service has involved clientele in program development to some extent at all levels. The administrator of the Federal Extension Service uses the Extension Committee on Organization and Policy as an advisory group on policies and programs. On occasion the administrator has selected or has appointed a special committee to advise him on a specific problem. The Division of Research and Training, Extension Service, USDA, uses the training committees of the Association of State Universities and Land Grant Colleges as advisors to some extent.

A few state directors have used a state committee

selected from the primary clientele of the organization.

South Carolina has an Extension Council, composed of all professional personnel. It serves somewhat as does a faculty council for resident instruction.

Many 4-H groups involve professional personnel, 4-H leaders and older boys and girls in program development. Often, however, the advice is limited to policies relating to events or activities such as the short course, projects, and contests.

A few supervisors involve their clientele in determining objectives.

County Extension personnel have been most active in this respect. The involvement of clientele in program development started in the counties very early and is now most extensive. The local committees who sponsored farmers' institutes not only made local arrangements, but suggested topics for discussion and occasionally requested specific speakers. County farm bureaus were first organized to guide Extension work, as well as to support it financially. The Cornell Study Clubs and Iowa Home Economics Associations made recommendations concerning programs.

Oregon Plan

Later county Extension agents began involving clientele in the communities. Generally, the approach was simple, consisting of questions such as: What are your needs? What are your problems? There followed a discussion, recommendations for solution and the development and the acceptance of plans. According to W. A. Lloyd, Oregon began in 1922 a more sophisticated approach to the involvement of clientele in the counties in program development. He described the approach in these words:

> Fact organization as a basis for program development had its first important development in the state of Oregon in 1922. A number of fact organization committees were appointed by the Extension Service on an enterprise basis. Reports by these committees were formulated and adopted at a State Economic conference. These were published as a report and have since furnished a general background

for further fact organization on a county, regional, and enterprise basis.

Some 19 counties in the state of Oregon have held one or two day fact organization conferences, with the college people and local farmers participating. In a few of the counties, facts relating to the home have been considered by special committees. The conclusions have been published in printed bulletins.

Two conferences in relation to irrigation have been held and the facts organized. Two enterprise conferences have been held for consideration and assembly of facts relating to particular commodities—wheat and prunes; other county and regional conferences are to be held.[3]

During the next few years this approach was tried by a large number of states, first in the West and then in other regions of the country. Land use planning and program projection stimulated further interest in the involvement of local people in the counties in developing the Extension program.[4]

Problems

Today, counties use a variety of approaches. Some believe strongly in the community approach, in which all objectives originate through participation of all the adults and youth in the community or through committees which represent them. Others have approached the process of involvement on a county basis. They organize committees covering each phase of agriculture, home economics, and related subjects, including, in some cases, public problems and total resource development. In some other counties, objectives are considered separately for home economics, for agriculture, and for youth. In still other counties, the procedure is coordinated so that there is separate and then joint consideration of the total program. In some states, the operation is periodic. In others, it is continuous.

All of the clientele may be involved if the number is sufficiently small to be handled as one discussion group. Just how many constitute the maximum will depend partly on the skill of the Extension worker in group discussion. An additional factor is the knowledge and attitude of the participants. Generally,

however, twenty is the maximum number which can be handled even by a person very skilled in the technique of discussion.

If the number of those to be reached is so large that they cannot all participate, representation may be provided through a committee or council. But before proceeding with the organization of such a group, it will be necessary to make a number of decisions. Some of the questions which will be raised and which must be answered are: Is the council to operate on a continuing basis or periodically? Will it be organized on a community, county, or area basis? Will the membership act as individuals or will they be considered representative of groups or organizations? How will the committee function? What will be its relationship to professional personnel? These and many other questions must be raised and answered before this approach can be fully successful.

Another major problem is that of how to secure, analyze, interpret, and present the facts of the situation.

Importance of Attitude

The Extension worker is the most important factor in determining the success or failure of involving clientele in the selection of objectives. His enthusiasm for or reluctance to engage in this activity will be transmitted to the clientele who are participating. His intellectual skill and competence in organizing a voluntary group and in leading them to a consideration of their problems are of critical importance for success. He must be competent and diligent in securing, analyzing, and presenting the facts of the situation.

Over the years there have been a few Extension workers who felt that the clientele should dominate this activity. They felt that no objective should be included in the Extension program which was not selected by or at least approved by the clientele to which it is directed. *It is, nevertheless, more desirable for the selection of objectives to be a joint enter-*

prise of the clientele and the professional personnel. The clientele may not be aware of their real needs, and needs must be translated into wants before they stimulate action. Therefore, it may be good Extension teaching to include in the program some objectives aimed at meeting needs of which the clientele may not be fully aware.

DETERMINING NEEDS

A need is defined as the situation in which behavior of clientele deviates from a standard.

The deviation may be above or below the standard. A farmer may use too few chemicals too late to control insects successfully and profitably. Or he may use too much too early. A farmer may not use enough fertilizer, or he may use too much. A housewife may undercook or overcook food. She may not sew a good seam. Or she may pink, overcast, or make other unnecessary finishes on the underside of a garment. The need arises because the behavior deviates from the standard.

Acceptable Standards

A worker, having a psychological need of being fairly treated, has in mind a standard of conduct for his supervisor which will be acceptable. The key word is *acceptable. Extension personnel generally have not developed acceptable standards.* In far too many cases, particularly in working with lay people, they have simply said, "Here are the results of research. This is what we should do." Research is valued highly by many farmers. However, most of them do not consider research results as representing acceptable standards. They do not think that it is necessary that research always be practical. They think that research may have resources which are not available to them. They fear that they may not be able to match conditions under which the research results were obtained.

In a few cases, research is specific. For the control of some insects and some diseases there is only one

answer—there is only one material which is effective and which can be used. In that case, the results of research do automatically become an acceptable standard. On the other hand, very often the results of research are not so specific. Determining the amount of fertilizer to apply is an example. The farmer may not have soil that is in the same tilth as that of the experiment station. He may not be able to take the risk involved in using the amount that has proven to be profitable. He may not have the managerial ability to handle a crop so highly fertilized. Therefore, it is desirable to set up a sliding scale recommendation where the conditions of the farmer may be considered. Developing such a sliding scale *with the aid of the type farmers who will use the recommendation* is very desirable. It will make the recommendation acceptable to them.

Felt Needs

A felt need is one recognized by the clientele. One of the great advantages of having clientele participate in the selection of objectives is the opportunity to receive from them a statement of the critical needs recognized by the population. It is, therefore, extremely important that Extension planning committees be *representative* of the clientele being served.

Unfelt Needs

Unfelt needs should also be determined. A dairy farmer may need more income to send a child to college. He may establish an objective of increasing the size of his herd.

It is possible that the farmer's real need is to increase his production per cow. His profits might be greater than if more cows were added. In Extension work, people must be helped to reach their objectives or helped to develop objectives which are more practical or more related to their basic but possibly unfelt needs. Raudabaugh has this to say:

> An Extension worker cannot always be aware of people's purposes or objectives. He may have to set out deliberately to learn what they are. However, an alert worker can spot some of them as they emerge in the course of routine activity. He must think through situations and attempt to foresee what specific desires or needs are likely to reach the awareness level of the people. Often it is necessary, and desirable, for him to do a little stage setting and manipulate the environment to help the needs and purposes emerge to be recognized.[5]

Research has shown that there are a number of factors that influence the objectives of clientele and, thus, produce action. In summarizing this research relating to rural people, Lionberger[6] grouped these factors as: social, cultural, personal, and situational. But this writer knows of no synthesis of research on factors influencing the behavior of professional Extension personnel. Studies similar to the one by Clegg need to be greatly multiplied.[7] The latter reported that a feeling of satisfaction and a sense of accomplishment were powerful motivators of county Extension personnel. Until such studies are made, it will be necessary that executives, supervisors, and subject matter specialists rely upon their basic knowledge of motivation.

EXAMINING PROBLEMS

Each problem which grows out of a need should be examined to determine why it exists and exactly what will be necessary to solve it. Does the need exist and thus become a problem because of a lack of knowledge or a lack of skill, or because of the wrong attitude? Is it due to a deficiency in physical resources? Is there something in the social system, the customs and ways of the people, which prevents its solution? To answer these questions will require, in many cases, a study of the people and of their situation. Only then will it be possible to determine exactly what action will be required to solve the problem and thus satisfy the need. Alternative solutions should be considered.

USING RESOURCE PEOPLE

Extension should seek the advice, counsel, and recommendations of all persons who could possibly make a recommendation that would be worthwhile in the development of objectives of the service. Two problems confront workers in this connection: first, deciding what resource persons to use; and second, how to use them.

Traditionally, county personnel have considered the subject matter specialists of the Cooperative Extension Service as primary resource persons. Some agents have used county personnel of federal, state, and local agencies in this capacity. Other Extension personnel will find resource persons in the teaching and research staffs of the college of agriculture and in commercial organizations serving agriculture. Occasionally, resource persons may be obtained from other colleges of the university. In some cases, executives will find it necessary and desirable to employ specialists to work with them.

How shall the recommendations of these resource persons be obtained? Some Extension personnel feel that these resource persons should be full members of the advisory committee or council with the right to vote, or that they should actively participate otherwise in the selection of objectives. Some Extension workers feel that it is preferable for these persons to act as consultants to the clientele who are involved in this activity. There are still others who feel that these recommendations can best be obtained through conference.

There is a danger that if these resource persons serve as full committee members there may be a tendency for them to dominate the committee. It is often desirable to have committees made up of lay people with a small amount of formal education. Usually the resource people will be better trained, more able to speak, more able to express their thoughts forcefully than others who participate. As a result, the lay members of the committee may be too reticent to speak

and they, therefore, may not make their full contribution. Adults are extremely cautious in many cases as they do not want to be embarrassed.

On the other hand, to attempt to secure the suggestions of other professional personnel through conference may not be too desirable. The attitude and feeling of the people cannot be detected by resource persons who do not have contact with them. Through contact they get the feeling of the people involved. They thus may be able to make their maximum contribution. It would, therefore, seem desirable for these representatives to serve as consultants, but also sit in meetings and serve as there is need. They should furnish information when requested, but they should give the clientele the major responsibility for the discussions and decisions.

SCREENING OBJECTIVES

Tyler suggests that the objectives thus obtained must be screened.

> The suggestions regarding objectives obtained from the three sources previously cited provide more than any school should attempt to incorporate in its educational program. Furthermore, some of these suggested objectives are inconsistent with others. A smaller number of consistent highly important objectives need to be selected. A small number rather than many should be aimed at since it requires time to attain educational objectives; that is, time is required to change the behavior patterns of human beings. An educational program is not effective if so much is attempted that little is accomplished. It is essential therefore to select the number of objectives that can actually be attained in significant degree in the time available, and that these be really important ones. Furthermore, this group of objectives should be highly consistent so that the student is not torn by contradictory patterns of behavior.
>
> To select a group of a few highly important, consistent objectives, it is necessary to screen the heterogeneous collection of objectives thus far obtained so as to eliminate unimportant and the contradictory ones.[8]

The reasons for screening presented by Tyler are valid for the Extension worker. Whether he attempts to analyze the situation in a short or long period of

time or continuously, he will need to be selective in the objectives included in the program.

Tyler suggests the educational and social philosophy of the school as the first screen:

> An adequate formulation of an educational and social philosophy will include the answers to several important questions. In essence, the statement of philosophy attempts to define the nature of a good life and a good society. One section of an educational philosophy would outline the values that are deemed essential to a satisfying and effective life. Quite commonly, educational philosophies in a democratic society are likely to emphasize strongly democratic values. For example, one such statement of philosophy emphasizes four democratic values as important to effective and satisfying personal and social life. These four values are: (1) the recognition of the importance of every individual human being as a human being, regardless of his race, national, social, or economic status; (2) opportunity for wide participation in all phases of activities in the social groups in the society; (3) encouragement of variability rather than demanding a single type of personality; (4) faith in intelligence as a method of dealing with important problems rather than depending upon the authority of an autocratic or aristocratic group.
>
> When a school accepts these values as basic, the implication is that these are to be aimed at in the educational program of the school.[9]

Objectives relating to "a good life and a good society" were pointed out as ultimate national objectives in the previous chapter. They are held in common by the Cooperative Extension Service with all educational institutions; in fact, with all government. They do give general direction to the program of the Cooperative Extension Service.

The psychology of learning is a screen for objectives:

> There is a second screen through which the suggested objectives should be passed and that is the criteria for objectives implied by what is known about the psychology of learning. Educational objectives are educational ends; they are results to be achieved from learning. Unless these ends are in conformity with conditions intrinsic in learning they are worthless as educational goals.[10]

Tyler points out a number of ways in which a knowledge of the psychology of learning assists in selecting objectives. Three are particularly important to Extension: (1) it enables us to distinguish those objectives

which can be reached through the learning process from those which cannot be reached through this process: (2) it enables us to distinguish goals that are feasible and can be reached in a reasonable period of time from those that are almost impossible of attainment at the age level of the learners; and (3) it enables us to understand the conditions required for learning certain types of objectives.

The objectives undertaken by the Cooperative Extension Service should be educational in nature. In other words, they must be attainable through the learning process. However, it is not enough that they be educational. The Cooperative Extension Service is not a general educational organization. It is entirely possible that an objective may be educational but still not be adapted to the organization. It is possible that an objective would require for its attainment a definite well-organized course of study extending over a period of time. Since federal or offset funds cannot be used for courses of study in college, such an objective would not be acceptable to the organization.

In addition, the objective may be educational but not acceptable to Extension because of the subject matter required. Agriculture, home economics, and subjects related thereto are broad terms, but not unlimited. Some states for many years have had too many functional illiterates. To raise their level of knowledge was a desirable educational objective, but not one to be undertaken by Extension.

The objective "to train all 4-H leaders to train 4-H club members to prepare and give demonstrations at achievement days" would pass this screen. Training leaders to train members is an educational process.

The objective "to assist 150 farmers to calibrate spraying equipment for the proper application of preemergence chemicals" would not pass this test. To assist farmers to calibrate spraying equipment is a personal service performing an operation that farmers can and will learn to do for themselves, if taught.

Program objectives of the Cooperative Extension Service should be attainable within the foreseeable

future. The screening of objectives through a knowledge of educational psychology enables us to determine those goals that can be reached in a reasonable period of time.

Some types of objectives are more difficult to teach than others. From educational psychology we learn that it is difficult to change basic attitudes. Studies also show that specific information is learned more easily and is retained over a longer period of time when the learners have an opportunity to practice the knowledge in their daily living.

Some other screens for Extension objectives are:

The objectives must be within the scope and legal responsibility of the organization and of the individual engaging in the activity.

Information must be available for solving the problems involved.

In examining the needs of the clientele, quite often problems are raised, based on real needs, which are not appropriate for action by the Cooperative Extension Service. Objectives should first be examined to see if they are within the scope and legal responsibility of the organization. While the national charter of Extension is extremely broad, and it may be broadened by state or local action, it does not cover the entire educational field by any means. In addition, the Extension worker who is developing objectives may have a limited responsibility. The objectives should be limited to that responsibility.

Where the problem can be solved only by work not appropriate to Extension, the council or committee should not take it upon itself to get the job done. Desirable objectives which are beyond the scope of Extension or which are not attainable through the educational process should be referred to appropriate organizations for the latter to follow through in their programs.

Objectives should be checked to be certain that information is available for the solution of the problems involved. Sometimes Extension workers may suppose that information is available when actually it is not.

Therefore, before action is undertaken on a new problem or on a new approach to an old problem, the people who are doing research upon it should be contacted for their advice and counsel. Of course, the experience of experienced, successful clientele should never be ignored.

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Chapter 4

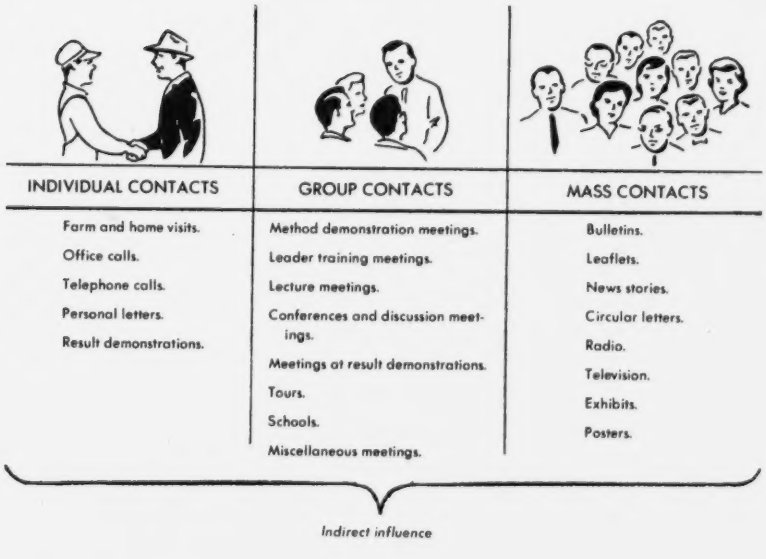
SELECTING LEARNING EXPERIENCES

The term "learning experience" is used in preference to "method" and "technique," which are other designations for the way the teacher presents subject matter.

The term "Extension method" is used in works by Smith and Wilson and Wilson and Gallup. Wilson and Gallup[1] developed a list of methods. They divided them into two groups: (a) Methods classified according to use; and (b) Methods classified according to form.

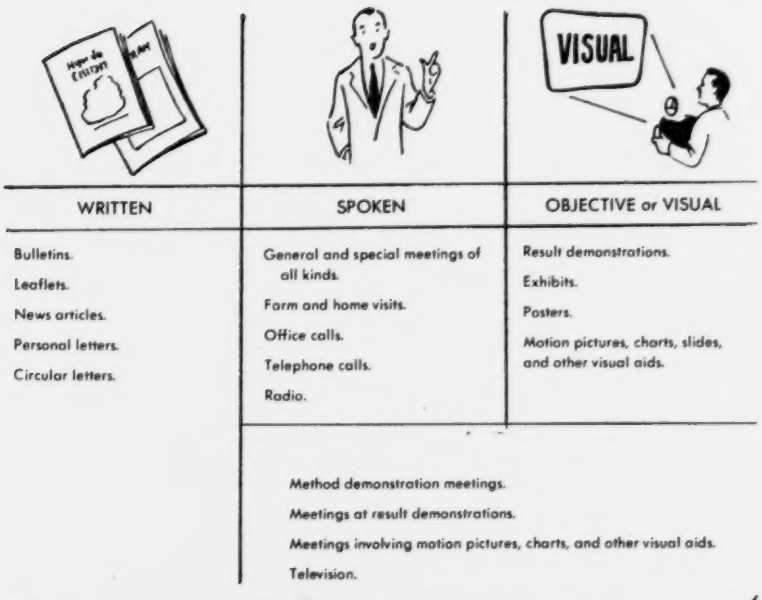
Methods Classified According to Use

(Figure A)



Methods Classified According to Form

(Figure B)



Their lists do not mention 4-H Clubs, Home Demonstration Clubs, and other channels important in Extension teaching. The inclusion of "indirect influence" as a method is considered inadvisable as it can be planned for and executed in only a most indirect manner.

Bergevin, Morris and Smith do not agree with Wilson and Gallup on a concept of method. They define method as:

> . . . an established or systematic order for performing any act or conducting any operation. The relationship established by an educational institution with a group of participants for the purpose of systematically diffusing knowledge among them. Some methods of adult education are correspondence study, the coordinated course and community development.[2]

Verner agrees with Bergevin, Smith and Morris. He says:

> The method of education identifies the ways in which people are organized in order to conduct an educational activity. A method establishes a relationship between the learner and the institution or agency through which the educational task is accomplished.[3]

Bergevin, Morris and Smith use the term "technique" and present this list of techniques, subtechniques and educational aids:[3]

Fourteen Educational Techniques

Colloquy	Panel
Committee	Quiet Meeting
Demonstration	Role Playing
Field Trip	Seminar
Forum	Speech
Group Discussion	Symposium (ancient concept)
Interview	Symposium (modern concept)

Six Subtechniques

Audience Reaction Team
Buzz Session
Idea Inventory
Listening and Observing Groups
Question Period
Screening Panel

Some Educational Aids

Annotated Reading Lists
Case Histories
Exhibits
Films, Filmstrips and Slides
Information Briefs

"LEARNING EXPERIENCE" DEFINED

The term "learning experience" as used by Tyler is sufficiently broad to include both "method" as defined by Wilson and Gallup and "technique" as defined by Bergevin, Morris and Smith and by Verner.

> The term *learning experience* refers to the interaction between the learner and the external conditions in the environment to which he can react. Learning takes place through the active behavior of the student; it is what he does that he learns, not what the teacher does. It is possible for two students to be in the same class and for them to be having two different experiences. Suppose that the teacher is making an explanation and that one student is much interested in the problem and is following the explanation mentally, seeing the connections that are made and taking from his own experience certain illustrations as the teacher goes along with the explanation. On the other hand, it is possible for the second student to be engrossed in thoughts of a forthcoming basketball game and to be devoting his attention entirely to planning for this game. It is obvious that although the students are in the same class, they are not having the same experience. The essential means of education are the experiences provided, not the things to which the student is exposed.
>
> This definition of experience as involving the interaction of the student and his environment implies that the student is an active participant, that some features of his environment attract his attention and it is to these that he reacts. The question may be raised as to how far it is possible for a teacher to provide an educational experience for a student since the student himself must carry on the action which is basic to the experience. The teacher can provide an educational experience through setting up an environment and structuring the situation so as to stimulate the desired type of reaction. This means that the teacher must have some understanding of the kinds of interests and background the students have so that he can make some prediction as to the likelihood that a given situation will bring about a reaction from the student; and, furthermore, will bring about the kind of reaction which is essential to the learning desired. This theory of learning does not lessen the teacher's responsibility because it recognizes that it is the reactions of the learner himself that determine what is learned. But it does mean that the teacher's method of controlling the learning experience is through the manipulation of the environment in such a way as to set up stimulating situations—situations that will evoke the kind of behavior desired.

It should also be noted that it is possible for each student in the class to have a different experience even though the external conditions appear to be the same. This places considerable responsibility upon the teacher, both to set up situations that have so many facets that they are likely to evoke the desired experience from all the students or else the teacher will vary the experiences so as to provide some that are likely to be significant to each of the students in the class. The problem, then, of selecting learning experiences is the problem of determining the kinds of experience likely to produce given educational objectives and also the problem of how to set up situations which will evoke or provide within the students the kinds of learning experiences desired.[5]

GENERAL PRINCIPLES OF SELECTION

Tyler presents five principles applicable to the selection of learning experiences. For Extension workers there is a sixth. These principles are:

1. The first—for a given objective to be attained, a student must have experiences that give him an opportunity to practice the kind of behavior implied by the objectives.[6]

Thus, if the objective is for 4-H Club members to present demonstrations at achievement day they must have learning experiences which will enable them to develop the intellectual skills necessary to give a demonstration.

2. A second principle is that the learning experiences must be such that the student obtains satisfaction from carrying on the kind of behavior implied by the objectives.[7]

This principle is doubly important to the Extension worker and in the Cooperative Extension Service. If the kind of behavior implied must give satisfaction in formal education, how much more so in the Cooperative Extension Service!

3. A third general principle with regard to learning experiences is that the reactions desired, the experiences are within the range of possibility for the students involved.

That is to say, the experiences should be appropriate to the student's present attainments, his predispositions, and the like. This is another way of stating the old adage that the teacher must begin where the student is.[8]

This principle emphasizes the absolute necessity of the Extension worker being aware of the knowledge and skills of his clientele so that he may build

learning experiences on that knowledge and those skills.

> 4. A fourth general principle is that there are many particular experiences that can be used to obtain the same educational objectives.[9]

This principle has limited application to the Cooperative Extension Service. Actually, there are some conditions in which only a limited number of educational experiences can be used to best advantage. These conditions will be discussed later in this chapter.

> 5. A fifth principle is that the same learning experience will usually bring about several outcomes.[10]

This principle is certainly applicable in the work of the Cooperative Extension Service. We cannot always be certain of all of the consequences in the operation of a farm, home, or business that may result from the application of one piece of knowledge.

There is one additional or sixth principle applicable to the Cooperative Extension Service:

Instructors should select learning experiences.

Through the years, some Extension personnel have maintained that learning experiences should be selected by the clientele. Others have presented the philosophy that the learning experiences should be selected jointly by the clientele and by the Extension worker. Still others have maintained that they should be selected by the professional Extension worker. This writer could find no research to support either point of view. However, the Extension worker should have the most complete knowledge of the situation. He may be the only one who knows the real objective. In addition, the instructor should be better trained in the ways Extension provides learning experiences. Therefore, it seems reasonable to maintain that the Extension worker should be the one to select the learning experiences which are provided.

This viewpoint does not preclude an occasional semiformal check on some particular experience which is new or which has been used for several years. For example, it would be well for an Extension worker to explain to his planning committee the workings of

a tour, provided they have never participated in one or read about how it was conducted. He might get their reaction to undertaking a tour in his particular area. After a tour had been conducted for several years, it could be advisable to check with a few leaders about its continuance. The Extension worker might ask, "Has our tour become boresome?" "Should we try this year field meetings at demonstrations in the communities?"

As we increase our research (formal studies) and synthesize that research, we will learn a great deal about the effectiveness of learning experiences under different conditions. We will learn under which conditions certain types of learning experiences will have the approval of the participants. We will also learn of the effectiveness of these learning experiences in reaching certain objectives.

FACTORS INFLUENCING SELECTION

A study of the ways in which Extension personnel provide learning experiences will show that each learning experience has special, but sometimes limited, applicability. Knowing this applicability and being able to carry out the learning experience with finesse are marks of a professional Extension worker.

The subject matter to be taught is one of the first factors to be considered. A method demonstration is particularly well adapted to teaching a skill, a procedure, or a process. A result demonstration helps to establish confidence in the practice on the part of the worker and to establish a background of experience which will be valuable in teaching the clientele in general. News stories and radio broadcasts help to create awareness. The discussion group has particular value under some conditions in encouraging adoption.

All of the *sociological, economic, and psychological factors* that influence the selection of objectives also should influence the selection of learning experiences. People who are not socially mobile will prefer not

to leave their neighborhood or community. People with a low level of formal education generally will not respond too well to experiences which require much reading. People with low incomes cannot travel extensively, and they cannot buy expensive materials. These are but a few of the factors in a situation which influence the selection of learning experiences.

The stage in the life an organization has reached is a critical factor. Three stages in the life of an organization may be recognized. They are the initiating stage, the developing stage, and the established stage. A new organization may be forced to adopt an approach and provide learning experiences which would not be necessary at all for an organization which is well established. This fact is well illustrated by the history of the Cooperative Extension Service.

When the organization began establishing itself as a nationwide, permanent educational institution, appropriations were required of the counties for the support of Extension work. In one state, two-thirds of the salary of each county and home demonstration agent or 4-H agent was required locally. Most states had a similar requirement, although the proportion of salary required was not uniform. As a result, it was necessary that county Extension personnel conduct some type of dramatic program which would catch the imagination and produce the support which was necessary.

In the South, following the boll weevil and World War I emergencies, agents spent much of their time vaccinating livestock, terracing, and culling farm flocks of poultry to prove the value locally of those practices. Later the cooperative purchase of fertilizer, feed and other supplies and the cooperative sale of crops and livestock were primary activities in maintaining Extension work in the counties.

The situation in the South was not unique. McNelly reports on early work in Minnesota:

> The corn-alfalfa day programs in West Central Minnesota were annual affairs and gala days.
>
> Corn acres were increased as well as alfalfa and 90 carloads of improved cattle were purchased and shipped in

by the agents or 'as a result of their efforts'. For the most part, these were sold at public sales and the profits, if any, were prorated back to the purchasers. The agents also assisted farmers in the sale and exchange of seed grain and livestock within the counties.[11]

Turner describes early work in the state of Washington:

> Few people today would attempt to place a dollar value on education of a pupil through high school, or a year of schooling. But college administrators seemed forced to place a price tag on Extension results in the early days of Extension. Some of these value statements will be surprising to Extension workers today. Here are some extracts from Director Thornber's first report of 1916:
>
> > 'In King County, the Duvall drainage project of 3,000 acres, with an estimated increase of $150 per acre, increased the total valuation of the project by $450,000.'
>
> At the time statements similar to this had the general effect of selling county agent work to the county commissioners and the local people. It must be remembered that some effective salesmanship was necessary to secure local appropriations for county agents. The dollar value was used for the first 15 years after the Smith-Lever Act was passed.[12]

The educational purists, however, were critical of this type of activity. They berated the Extension Service for becoming a *service* rather than an educational organization. As a result, there was considerable argument through the years. Unfortunately, it was not recognized that this was a necessary stage in the development of the organization. Certainly in the United States today it is not necessary for an Extension worker to prove immediate financial returns in order to justify his existence. However, in other countries where Extension work is being established, or in the United States when Extension begins serving a new clientele, leaders need have no fear of rendering some service of this type in order to catch the imagination of their people. In fact, it may be necessary where local appropriations are being required. It may always be advisable for an Extension worker to occasionally do something spectacular to dramatize a need and create interest.

The stage the clientele have reached in the diffusion process is a valuable guide in selecting learning ex-

periences. An Extension worker is most unwise who takes the time to make visits to develop awareness on the part of clientele. Awareness can be developed with experiences which will be less time consuming. There are learning experiences which are particularly valuable at each of the other stages, which are evaluation, trial, and adoption. The stage of the clientele in the diffusion process influences the selection of objectives and should influence the selection of learning experiences provided to reach those objectives.

The intensity of emphasis will also influence the selection of learning experiences. There are four degrees of intensity. In the least intense effort, *introduction and evaluation*, only a result demonstration may be used. When value has been proven, however, only *minor* emphasis may be given because of a lack of time or lack of significance of the practice. Mention at a meeting, and the use of a small amount of mass media may be the only learning experiences provided.

Major emphasis is given periodically to important problems. With major emphasis, a wide variety of learning experiences are provided.

In a *campaign*, the maximum variety of learning experiences applicable are used.

The kinds of learning experiences provided in past years will also influence their selection in any particular year. Variety is, indeed, the spice of life. If for no other reason, it is desirable to use, from year to year, a variety of experiences which will be stimulating to both the instructor and the learners.

A new worker may emphasize learning experiences which he will not use to such an extent in later years when he becomes well established. It is a known fact that part of the effectiveness of Extension work is based on the relationship between the instructor and the learners. An Extension worker who is new on the job should make more direct individual personal contacts than may be necessary or advisable in later years.

The competencies, likes, and dislikes of the worker will also influence the type of learning experiences which are provided. Training should be aimed at

making him equally competent in all of them. However, human beings are inclined to like to do the things which they feel they can do well. They value more highly those learning experiences in which they feel competent. We can, therefore, expect that the ability of the individual, his training, his likes, and his dislikes, will influence the type of learning experiences which are provided.

The amount of time available is also a factor to be considered in providing learning experiences. Where a program will extend over a producing season, a variety of learning experiences can be planned, arranged for, and conducted. An emergency, however, presents an entirely different situation. The outbreak of a disease of plants or animals creates a situation in which information must reach producers and owners immediately and they must be stimulated to action. The mass media, or learning experiences provided in groups, are absolutely necessary.

The availability of office personnel and office facilities will also be a factor in determining the use of learning experiences. For example, without secretarial help and facilities for reproducing and mailing material, locally prepared circular letters can be used only to a limited extent.

The available mass media and the relationship of the organization to them will be another factor in the selection of learning experiences. The newspapers, both daily and weekly, and radio and television stations are vehicles which the Cooperative Extension Service may use for providing learning experiences. The fact that these facilities are located in an area does not necessarily mean, however, that they are available to Extension personnel. The relationship which Extension workers have developed with the media people and the standard procedure which is being followed in use of the media are critical factors. Rather generally, the daily papers are not available for certain types of material. A radio station might be available for a regular, daily, or weekly program, but not available for broadcasting on an intermittent

basis, or vice versa. A television station might be willing to make available time for a regularly scheduled program, but not look with much favor on intermittent programs. In such cases, the advisability of developing a regularly scheduled program must be considered.

The number of individuals in the clientele and *their physical proximity* to each other and to the instructor are critical elements in the selection of learning experiences. A clientele of 25 individuals located in one community presents one problem, whereas a clientele of 25 individuals scattered over a county presents a different problem and scattered over a state of average size or a nation the size of the United States would present a still different problem. A clientele of 1,000 presents a different problem from a clientele of 25 and a clientele of 50,000 or 100,000 presents entirely different problems. One may reasonably ask whether home economists should attempt or organize groups in an urban situation where they have a clientele of many thousands, or even millions.

SUGGESTED LISTS OF EXPERIENCES

Unfortunately, there is no up-to-date generally-accepted list of learning experiences. The methods of classification and terminology used vary considerably. Time and effort could well be spent by persons in the profession in standardizing terminology.

The following lists are suggested for consideration and discussion:

A. Learning Experiences Designed Primarily to Contact Persons Individually
   1. Visit
   2. Office call
   3. Telephone call
   4. Answering set

B. Learning Experiences Designed Primarily to Contact Persons in Groups
   1. Result demonstration
   2. Method demonstration
   3. Meeting
   4. Tour
   5. Field day
   6. Workshop

7. Clinic
8. Short course
9. School
10. Camp
11. Contest
12. Achievement day

Result demonstrations and method demonstrations are classified by Wilson and Gallup as individual contact methods. However, the result demonstration should be used to influence others in addition to the demonstrator. A method demonstration may be given to one person, but more often is presented to a group.

This classification brings all meetings together. But Extension conducts many different kinds of meetings. A meeting may be held at a result demonstration, or to give a method demonstration. A meeting may be held for the purpose of developing discussion (and there are several kinds of discussion). A meeting may have a speaker, a panel, or a forum discussion, and discussion may be included with each. Meetings may be held in a neighborhood, community, county, area, state, nation or internationally. They may be held day or night. There are many kinds of Extension meetings.

The terms *short courses* and *schools* should be more accurately defined. There appears to be a tendency to use the terms interchangeably. Some measures of time used in instruction could be the base in deciding what is a short course and what is a school.

C. Learning Experiences Designed to Reach Masses of People
   1. News item, column, and feature story
   2. Direct mail (circular letters—special and regular)
   3. Handbook
   4. Exhibit, fair, and festival
   5. Bulletin
   6. Radio
   7. Television

Actually the news item, column (a rather general word), and feature story could be considered individually. They have much in common. However, each is distinctive and is valuable under certain conditions.

Exhibits, fairs, and festivals might also be con-

sidered individually, although they have much in common.

D. Learning Experiences Provided Through Aids to Extension Education
   1. Organizations to work with and through:
      a. Home demonstration club and council
      b. 4-H club
      c. Non-Extension organization
   2. Visual aids
   3. Voluntary local leader
   4. Approaches involving a combination of learning experiences
      a. Farm and home development
      b. Community development
      c. Campaign

Some Extension workers would like to include planning committees as one of the organizations through which Extension teaches. Others would like to consider auditory aids as an aid to Extension education.

MORE KINDS WILL BE USED

As Extension continues to develop, it will devise or adapt and adopt additional ways of providing learning experiences. As the organization recognizes instruction as a major internal function, it probably will use several of the techniques developed for work in adult education in general. Fortunately, the Smith-Lever Act says, ". . . through demonstrations, publications and otherwise."

Only Individuals Learn

It should be emphasized that *only individuals learn*. There is no such thing as "group learning" or the "mass mind." A variety of learning experiences is utilized so as to reach each individual one or many times and thereby influences his action.

Standards of Performance

A standard of performance should be developed for each learning experience. The professional Extension worker should become competent in their use. They are the "tools" of the trade and should become the hallmark of the profession.

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Chapter 5

ORGANIZING LEARNING EXPERIENCES

Learning experiences, to be most effective, must be so organized that they reinforce each other. Tyler presented this thought perfectly:

> Important changes in human behavior are not produced overnight. No single learning experience has a very profound influence upon the learner. Changes in ways of thinking, in fundamental habits, in major operating concepts, in attitudes, in abiding interests and the like, develop slowly. It is only after months and years that we are able to see major educational objectives taking marked concrete shape. In some respects, educational experiences produce their effects in the way water dripping upon a stone wears it away. In a day or a week or a month there is no appreciable change in the stone, but over a period of years, definite erosion is noted. Correspondingly, by the cumulation of educational experiences, profound changes are brought about in the learner.
>
> In order for educational experiences to produce a cumulative effect, they must be so organized as to reinforce each other. Organization is thus seen as an important problem in curriculum development because it greatly influences the efficiency of instruction and the degree to which major educational changes are brought about in the learner.[1]

There are two aspects of organizing learning experiences that must be considered by Extension workers: *Criteria*, which relates primarily to content of learning experiences, and *Structure*, which relates to instruments for recording the learning experiences planned.

CRITERIA

There are four criteria for effective organization: (1) continuity, (2) sequence, (3) integration, and (4) timeliness.

Continuity

"Continuity refers to the vertical reiteration of major curriculum elements,"[2] Tyler wrote.

Continuity emphasizes the fact that in Extension work it is necessary to repeat the material over a

period of time. Repetition at any one time may not be effective. However, it is necessary for effective teaching to repeat the material at later sessions. Repetition (or using different learning experiences) is also necessary to be certain that all of the population are exposed to the information at least once and preferably more than once. As a rule, not all of the clientele will participate in any one learning experience. Not all of the population read the newspapers, attend meetings, listen to the radio, or read a circular letter. However, by using each of these learning experiences, the Extension worker can be more certain that all of the clientele will be exposed more than once; that is, they will have received the information more than one time.

Because of the slow reaction of adults, however, it is doubly advisable to repeat the material at later dates. A recommendation may be repeated in a slightly different way a week later, a month later, or even six months or a year later. This constant reiteration has a much better chance of obtaining action than the presentation of only one learning experience.

Sequence

"Sequence emphasizes not duplication, but rather higher levels of treatment with each learning experience,"[3] Tyler explained.

Ordinarily, sequence has two aspects. The teaching should begin with the knowledge of the clientele. The ideas presented must be within the comprehension of the group; the recommendations must be reasonable to them. It would be foolish to discuss the use of a self-propelled combine as a means of reducing the cost of harvesting grain with a group of people who were still using the palm knife with which they harvested one head of grain at the time.

The second element of sequence is the idea that each successive presentation should be more difficult and go more deeply into the matters involved. This element is applied in Extension somewhat differently from

the way it is applied in formal education. In formal education, often one of the objectives is for students to master a field of subject matter. The teaching thus moves from the elementary to the advanced with the development of the students. The same pupil is exposed to the stages of development of both the student and the subject. In this sense, the element is applicable to Extension only to a limited degree. In a few cases, where Extension is teaching the decision-making process or a similar type of practice, it is applied.

However, the element is applicable to Extension teaching over time to new audiences. Subject matter as used by Extension is intended for immediate application in the solution of problems. To some extent both the complexity of problems, the difficulty of solution, and the educational level of clientele move up together. However, this aspect is most noticeable if viewed over a period of time with succeeding generations of clientele.

A good example is the problem of cotton insect control with chemicals. Fifty years ago there was a limited number of insects and a limited number of materials. Now, there are more insects and a large number of materials. Some of these materials are liquid, some are solid. They may be obtained in different strengths. Some destroy not only the harmful insect injuring the crop, but many beneficial ones. Therefore, the Extension teaching on cotton insect control is much more advanced than fifty years ago. A successful program requires much more detailed knowledge on the part of the farmer.

Integration

"Integration refers to the horizontal relationship of curriculum experiences,"[4] Tyler continued.

Integration contains two elements which are important in Extension teaching. An effort should be made to help the students see the applicability of the information not only to the particular problem at hand but to others of a similar nature. In addition,

the material should be so presented that the student increasingly gets a concept of the finished product. A home demonstration agent may begin a series of meetings on clothing by teaching how to set in sleeves and zippers. She begins with these subjects because the women have stated that these are their greatest problems. By beginning with what they feel are their greatest problems, she naturally catches their interest and then can move into the other elements which make up a practical, economical program of home sewing. After setting in sleeves and zippers, she can show the relationship of these items to the garment as a whole. She can relate the garment as a whole to the individual who will wear it. She can lead into the selection of patterns and materials to fit the personality of the individual. While demonstrating the actual sewing, she can show the methods whereby more simple but substantial seams can be constructed. Her real objective is to teach the women to produce garments that fit, give a good appearance, and are durable. She moves in that direction and holds up to them the ideal toward which they are striving.

Timeliness

Timeliness means presenting information at the time it has the greatest opportunity to influence action.

There are three elements of timeliness that must be considered by Extension workers: seasonal, procedural and psychological.

Agriculture operates with the seasons. It is controlled by natural laws. There is a time to plant, and there is a time to harvest. The Extension worker must know this production, harvesting and marketing cycle. His material must be presented at a time when it can be effective in influencing the action desired. Once the crop is planted, it is impossible to affect the variety and quality of the seed that have been put in the ground. Therefore, to influence the variety and the quality of seed, it is necessary to reach and influence the producer prior to the time that he

acquires his seed. After an animal is bred, it is impossible to influence the quality of the sire that has been used.

In home economics, women normally do certain things in spring, summer, winter, and fall. Information to be most effective must be presented when decisions are being made that affect behavior in each of those seasons.

There is also a procedural schedule which must be kept in mind. There are some changes which cannot be made in a house after the foundation is laid. There are other changes in a house that cannot be feasibly made after the walls are up. Each major step in construction determines factors in the house that cannot practically be changed.

There is also a psychological timeliness which must be taken into consideration. Psychologists refer to it as "readiness" to learn. Sawry and Telford define readiness to learn as "the sum total of those characteristics within the person that facilitate or retard learning.[5]

They discuss three factors that affect readiness to learn: physical maturation, experential background, and motivation level. If either of these factors is absent or weak, learning will be adversely affected. Therefore, timing the presentation of subject matter so as to make maximum use of these factors is advantageous.

These considerations of timeliness are necessary in all the agribusiness complex.

STRUCTURE

All the elements should be included in the structure. Arranging for materials to be available is necessary. Evaluation should be conducted as an integral part of each operation in the instructional process. Therefore, the organizational structure will be presented after a discussion of those items.

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Chapter 6

ARRANGING FOR RESOURCES TO BE AVAILABLE

Clientele of an Extension program must have available the resources to carry out the practices necessary to reach the objective. A county agent makes the general recommendation that farmers treat their seed corn with a product designed to control seedling diseases, but fails to arrange for a supply to be available locally. A specialist recommends that county agents develop a program of establishing laying flocks of poultry as an enterprise, but fails to provide them with a bulletin presenting opportunities, pitfalls and steps necessary to success. A district agent makes plans to lead personnel in five counties to establish regularly scheduled radio programs, but fails to include in the plans arrangements to provide each county with a tape recorder. In each such case, an Extension worker fails to include in his instructional program an element essential to maximum success.

Educational authorities agree that if students are to learn, they must be able to practice what is being taught. *For Extension clientele to practice what is taught frequently requires a change in both physical and mental behavior.* Often, a change in a practice requires new materials or different equipment. How can the practice be applied if materials or equipment are not available?

Ayers, Assistant to the Administrator, Agricultural Program Service, U.S.D.A. (formerly Associate Professor of Agricultural Education, Clemson College), has said that three conditions must be met for a farmer to change a practice: (1) he must want to change; (2) he must know what to do and how to do it; and (3) he must have the resources available.

RESOURCES REQUIRED BY CLIENTELE

In addition to knowledge, skills, attitudes, and competencies, Extension clientele in the counties need

other resources in order to adopt recommendations to solve problems and satisfy needs. These needed resources might be classified as (1) credit, (2) equipment, (3) materials, and (4) services.

Credit

Agricultural production, through the years, has become more expensive. Capital in larger and larger amounts is needed. The capital resources of farmers generally never have been adequate to meet needs. This inadequacy has been particularly critical with new operations of all kinds. Credit agencies have been developed to fill much of normal requirements, but a new or unusual demand often was viewed with skepticism. Borrowed capital for better breeding stock, the application of a water control system, complete pasture renovation and improvement, and similar practices were not readily available. What can and should Extension do to make this resource available?

In the early 1920's, county agents helped organize and often served as secretaries of the early Farm Loan Associations organized under the Farm Credit Act of 1917. In emergencies, Extension has served as a lending agency. In 1931 and 1932, Extension helped to establish and operate the Emergency Seed and Feed Loan Program of the United States Department of Agriculture. County agents obtained clerical help to prepare applications for loans and established community and county committees to make recommendations concerning need, amount, and probable repayment of the loan. State office Extension personnel served in regional offices and made final recommendations concerning amounts, the legal basis, and security for the loans. However, these were emergency activities and did not represent normal Extension program efforts.

Extension personnel engaged in three types of activities relating to credit that have been effective. *They conferred with lenders* to explain the need for and advantages of practices which required additional finances. When the conferences were successful, Ex-

tension clientele found these lenders receptive to the idea of additional credit if the applicant were otherwise worthy. *Extension personnel prepared, on occasion, lists of lenders,* with a statement of the policies of each, and supplied these lists to clientele in need of credit. Occasionally, an *Extension worker brought together a group of clientele needing credit and representatives of lenders.* At such meetings, the representative of each lender presented the loan policies of his organization and there was general discussion. No applications were actually filed at the meetings.

Equipment

Often, one single new piece of equipment is essential to the adoption of a practice. An applicator for anhydrous ammonia is essential to the chemical's use. A tree planter has been necessary for planting large acreages of seedlings. Some dirt-moving equipment is essential to applying water control measures. Canning, drying, or freezing equipment is necessary for a home food conservation program. These are but a few of many possible examples.

During the crisis created by the drought of 1930 and the depression, Extension in some states attempted to make food conservation equipment available to all families at public expense. Automatic sealers and pressure cookers were supplied to agents for loan. Later, canning kitchens were established. Buildings and equipment were supplied by the community, often arranged for by the Home Demonstration Club. Supervisors, trained by the home demonstration agent, served without pay or were paid by some relief agency. As incomes rose, people provided their own equipment and the canning kitchens and loan services were discontinued.

Several appropriate ways have been found to arrange for the availability of equipment under normal conditions. Where a piece of machinery is within the means of the average person, it was found advisable

to present the advantages of *individual ownership*. Initially, in some cases, a small congenial group was encouraged to *cooperatively purchase* the implement and give it a good trial.

Later, each person bought equipment as desired. Occasionally, cooperative ownership of large units was found to be advantageous.

Extension has found it effective to arrange for *custom work*. Often, one farmer saw an advantage in owning a machine for use on his farm and for custom work for neighbors. In many cases, this plan proved more advantageous than cooperative ownership.

In the late 1950's, in some states, it became common for business and government subdivisions to own equipment and to make it available to producers gratis or on a rental basis. Some banks and paper mills bought tree planters and made them available, free of charge. Soil conservation districts in some states owned and operated considerable equipment on a custom basis and occasionally without cost.

Extension personnel have maintained a list of equipment for lending or for custom work and have advised clientele of the basis of their availability.

Materials

For farmers to use the varieties of crops recommended, seed must be available. For farmers to use fertilizers or insecticides recommended, these must be available. In all cases, it is desirable for them to be available in the channels of trade to which the farmer is accustomed.

In the early years of Extension, business firms often were more skeptical of Extension than farmers were. Extension agents found it necessary to have for sale the materials which they recommended; seed of recommended varieties for crops, fertilizers of the quality desired, insecticides of the kinds and quality recommended, materials for the control of livestock diseases, and canning equipment and cans, etc. These and many other products were actually sold by county

personnel. Later, private businesses and cooperatives handled such supplies as they were needed. In addition to making these materials available in the early days, the savings from cooperative purchase, which were passed on to clientele, were considerable and were an influential factor in the early establishment of Extension work in the counties.

Now, there probably is no reason for any Extension person to personally handle such products. But it is the continuing responsibility of Extension to keep commercial channels constantly informed of their recommendations.

Some county personnel hold a meeting annually with representatives of firms who sell supplies to farmers. At these meetings, recommendations are reviewed and needed materials are discussed. Other Extension workers prefer to *visit firms locally* whenever there is need to discuss recommendations and new materials.

State office personnel have assisted with this problem. They have *held meetings annually or periodically* with insecticide formulators and fertilizer mixers. *They have conducted a short course at the college* for the clerks and other salesmen of firms providing production supplies. Some states arrange an annual conference of aerial applicators, for example.

These activities have brought a favorable reaction.

Services

Among the services which clientele in the counties have needed are marketing, electrical, technical, telephone, etc.

Marketing services include assembling and processing, in addition to actual sales. Extension has found ways of assuring the availability of such services. In the early years of Extension, marketing channels were as poorly developed as production practices. There was as great a resistance to change by assemblers, processors and buyers as there was by agricultural producers or by homemakers. In many cases, it

was necessary for Extension to organize local sales agencies. Agents assembled carlots of hogs or cattle, accompanied them to market, made the sale and paid farmers for their products.

In one state, during the 1920's, county personnel held "chicken shipping days" on a regular schedule for some years. An arrangement had been made through a state organization with a wholesaler in a large city. This wholesaler sent a price schedule to each county each week. Agents drew a draft on him at the end of the day to which was attached the express bill of lading.

Many states found it advisable in early years to assist producers to organize cooperatives to supply services such as marketing and electric power.

In later years Extension services have found ways to influence marketing services. Some personnel were employed to work with buyers, assemblers, and processors. In addition, Extension often found it advantageous to promote and participate in demonstration sales of logs, livestock, and other products, to introduce and establish improved marketing practices.

A technical service is one that performs an operation needed for the application of other information, but which requires knowledge or skills not normally expected of clientele. The planning and engineering of a water-control system, a plan for overall farm management, and artificial insemination of dairy and beef cattle are examples.

There are five general ways that Extension workers have found to assure the availability of these resources.

1. Perform these services themselves
2. Develop cooperatives
3. Develop custom work
4. Arrange with other agencies—public and private
5. Train leaders

Only Item 4 needs elaboration. When the policy was adopted that the services of the Soil Conservation Service would be available only through soil conservation districts, the Extension services generally were instrumental in having passed a state law authorizing

districts and then in getting districts established. Farmers needing this service were then referred to the district available. In some states, forest product processors have made their foresters available for marking timber for selective cutting. Extension often recommends to clientele the use of this service.

RESOURCES FOR EXECUTION OF STATE PROGRAMS

County Extension personnel are generally the clientele of state Extension workers. The instructional process is most often used to influence the behavior of this group. Rarely is the authority of rank or position exercised. State office personnel find that the effectiveness of their program is closely correlated with the availability of resources to county personnel.

These resources may be grouped into: (*a*) office space and office equipment, (*b*) demonstrational equipment and materials, (*c*) equipment for visual and auditory aids, (*d*) equipment or facilities necessary for specific methods, (*e*) educational materials, (*f*) technical assistance, and (*g*) recognition of authority.

Office Space and Office Equipment

Minimum and optimum standards should be developed for office space and office equipment for each county. Regularly, or as there is opportunity, each county office should be brought up to that standard. The standard should reflect the importance of the service and be in keeping with the county situation.

Demonstrational Equipment and Materials

Demonstration equipment needed for the execution of county programs is so varied that it probably cannot be standardized. Therefore, plans for such equipment

should be developed for each major activity. Such a list for clothing would include: 1) a sewing machine and table; 2) steam iron and ironing board; 3) tailor's ham, tape measure, ruler, yardstick and color wheel.

Equipment For Visual and Auditory Aids

Minimum and optimum visual and auditory equipment for county or area offices should be developed by states. Some states supply some of this equipment from one or more central offices. It is practical, though, for each office to have possession constantly of many of the less expensive items. Their ready availability will encourage their use.

Facilities for Specific Needs

It is better to decide upon, select and provide most equipment as it is needed. By so doing, the latest equipment can be demonstrated.

Both public and private sources may be tapped for such items. A radio station may provide a tape recorder if Extension personnel can be depended on to present ear-catching programs.

Answering sets are a new gadget that have wide adaptability. A commercial sponsor often pays for the installation and operating costs.

Proper use of direct mail will be facilitated by a well-trained secretary, an electrically operated mimeograph machine, a folding machine, and an addressograph. Soil testing kits have been the *key* item in stimulating many soil improvement programs. The use of electric computers has become increasingly important in facilitating the keeping of farm records.

Small items should be remembered; for example, a portable drawing board, architect's scales, and a steel tape for home planning; a soil augur and tube for a soil fertility program; knives and other small items for a food preservation program.

Equipment employed by the demonstrators should be as similar as possible to that which will be used by clientele, be that clientele agents or nonprofessional people. Clientele seeing a demonstrator use a piece of fancy expensive equipment beyond their financial means or technical competence may immediately decide that the recommended practice is impractical.

It is not necessary for Extension personnel to own all the equipment they use.

Borrowing equipment from a manufacturer or local firm may have great public relations value and give greater assurance that the latest equipment will used.

Educational Materials

Bulletins, visuals, and other materials should be specifically planned for. It is advisable to have some publications for *general* distribution. Greatest return, however, will be obtained from publications prepared for specific use in a planned program. Often visuals can and should be provided in the county, but often the county supply can be augmented with additional contributions from the state office and thus made more effective.

Technical Assistance

As agricultural production became more technical and as the Extension program in the counties expanded in scope and complexity, problems were encountered which required knowledge not normally expected of county personnel. Specialists from the college or from some other source were needed to assist county personnel in attacking these problems. This situation became particularly acute when Extension moved into programs of total resource development, such as were stimulated by the United States Department of Agriculture beginning in 1955. It became necessary for state Extension services to tap areas throughout the college or university. The availability

of such resources made the program more successful in the counties.

Recognition As An Authority

County Extension workers need the prestige of being staff members of a college or university. The parent institution should keep them so well trained that their recommendations are in keeping with the most accurate information available. The parent institution should advertise this competence in every way that is practical.

Chapter 7

EVALUATION

Evaluation should be considered a necessary and integral part of the activities conducted in the giving of instruction. Generally, evaluation in the Cooperative Extension Service is divided into two main categories, evaluation of personnel and evaluation of programs. Personnel evaluation is somewhat broader than program evaluation, but program evaluation is a necessary part of the evaluation of personnel. Fundamentally, evaluation of programs and of personnel should be conducted in Extension for the purpose of improving performance of the functions of the organization.

A discussion of a system of personnel evaluation should be included in a presentation on administration or personnel management but is not appropriate here.

PROGRAM EVALUATION

There are many definitions of evaluation. We are thinking here of an activity which consists of a comparison. Program evaluation in Extension may be conducted for any one or a combination of four purposes:

a. To determine the situation.

b. To determine the quality of performance.

c. To determine the effectivess of learning experiences.

d. To determine the extent to which objectives are attained.

Evaluation of the Situation

Only through an evaluation of the situation can we determine needs, both felt and unfelt. Through an evaluation of the situation we can determine the factors which influence the decisions of clientele. With

knowledge of needs and knowledge of factors which influence the decisions of the learners, we are in a better position to select objectives. From this same information, we are also in a better position to select learning experiences. And finally, unless we know where clientele were when instruction began we have no way of determining progress, no way of determining the extent to which our objectives have been attained.

In evaluating the situation, we compare what is with what should be.

Determining Quality of Performance

Quality of performance is essential to good Extension work. It is possible that a circular letter poorly written and slovenly prepared is worse than no letter at all. It is probable that a meeting poorly conducted when it is not timely is detrimental to all of Extension work for quite some time. It is generally known that adults want to know how they are getting along. Naturally, quality of performance is of extreme importance to the supervisor.

Quality of performance may be partly determined by the worker himself, it may be determined by a friend or co-worker, it may be determined by the supervisor, or it may be determined by some other person. Quite often, the program manager of a television or radio station is an excellent person with whom to check performance related to communication through these media.

In evaluating performance, we compare what was done with what should have been done.

Determining Effectiveness of Learning Experience

We need to know a great deal more about the effectiveness of learning experiences. The population with which Extension works is often so heterogeneous and the conditions are so varied, that we need an unending

series of tests of the effectiveness of learning experiences. Only as we acquire this knowledge will we improve our efficiency and our effectiveness.

In evaluating learning experiences we make either one or two comparisons. When clientele are exposed we hope that *all* will be influenced to adopt the desired behavior. Therefore, each learning experience may be checked to determine the *percentage of clientele* influenced. Thus we compare actual influence with potential influence.

Learning experiences may also be compared with each other to determine *relative* effectiveness.

Determining the Extent of Attainment

To know that one has accomplished what he set out to do is most rewarding. Only by evaluating results to determine the extent to which our objectives have been attained can we know how much of a success our work has been. Such knowledge will be extremely satisfying to the personnel involved and is absolutely essential in convincing the public of the advisability of spending tax funds for the Cooperative Extension Service.

In determining the extent to which objectives are attained, we compare the behavior expected with the behavior accomplished.

CLASSIFYING EVALUATION

There is great variety in Extension evaluation, both in purpose and in the manner in which it is conducted. Because of this great variety, efforts have been made to classify evaluation activities by grouping them logically and systematically. Frutchey has discussed "Degrees of Evaluation":

> When we think of evaluation as a process of collecting information as a basis for making decisions, forming judgments and drawing conclusions, we realize it has much in common with scientific research. As with evaluation, we do scientific research to obtain usable information. Even so, there is a great difference between our casual everyday

evaluations (the umbrella decision) and scientific research. The difference, however, is a matter of degree rather than kind. It lies in the difference in the degree to which scientific method is necessary in the solution of problems.

In order to avoid emphasizing differences between evaluation and research, it is more useful to emphasize similarities. Casual everyday evaluations can be placed at one end of the scale and scientific research at the other end. All degrees are found between the two extremes.

Casual everyday evaulations	Scientific research

The value of such a scale is in realizing that we can improve our evaluations without becoming a scientist. Other locations can also be described on the scale between the two extremes, as follows:

Casual everyday evaluations	Self-checking evaluations	Do-it-yourself evaluations	Extension studies	Scientific research

The above locations are areas of the scale with no sharp lines of division. One blends into the other. The first three locations may be described as informal evaluations, which extension agents can do themselves.[1]

This classification has merit, but it is also objectionable in some ways to Extension workers. Frutchey infers that Extension studies are not research. What is "Scientific Research?" It is research conducted according to the scientific method. What is the scientific method? According to Bertrand:

> The scientific method involves four major steps. The first is the identification of a problem worthy of investigation.
>
> The second step is the formulation of a hypothesis, or a statement that expresses the belief that one condition or thing is related in a specific way to another condition or thing.
>
> The third step in the scientific method is the empirical testing of the relationships hypothesized or theorized.
>
> The last step in the scientific method is the classification and description in orderly fashion, of what has been tested and observed.[2]

Many Extension studies meet Bertrand's standard for "Scientific Research." On the other hand, the "casual everyday evaluations" should not be dignified

by the term "evaluation." No standard is established, no observations are made with that standard in mind, and no record is kept. To base action on this kind of reaction over the years is extremely dangerous. Memory is too short and too inaccurate to be a reliable guide. People and conditions are too complicated to base action on such "off the cuff" reactions.

Alexander[3] uses the continuum concept in discussing "Levels of Evaluation" (Table 1). This presentation also has merit and is particularly valuable in that it describes in some detail each of twelve levels in the continuum scale showing the diversity of evaluation in Extension. It also describes methods of evaluating performance. He, therefore, is inferring that the evaluation of performance is a legitimate and profitable activity. His presentation clearly indicates his acceptance of instruction as an internal as well as an external function. He points out that it is not necessary for all Extension workers to be trained as specialists in research, but that every state should provide such a person.

However, his presentation has some weaknesses. His first group, "habitual but unorganized" is of the "off the cuff," "umbrella" type of reaction which is without standard, plan, or record, and is, therefore, unworthy of being called evaluation. In addition, several of his examples are much more applicable to work with Extension personnel, if not exclusively so.

Methods or techniques can be used in evaluating instruction of Extension personnel that will not be adapted to evaluating instruction of persons not employed by the organization. In fact, the evaluation of instruction of Extension personnel can be quite similar, if not identical, to the way in which learning is determined in formal education.

With Extension personnel, it may be advisable to give tests, develop grades and supply these grades to supervisors. Not so with laymen. There are two reasons why such a practice is not advisable with lay clientele.

Tests and examinations are given to determine

knowledge or skill. *But the Cooperative Extension Service is interested in influencing the overt behavior of its clientele.* Knowledge is of value to them only as it exerts an influence on such behavior.

In addition, with lay clientele Extension is teaching a people who have complete freedom. They may participate or not, as they choose, in any activity. Tests and examinations are onerous and unpleasant to students in formal education and even to Extension personnel in training. How can we expect lay clientele to continue to participate in Extension activities if they know they may be subjected to an unpleasant experience?

When Extension personnel are training lay leaders to perform a service for remuneration, and the competence of such leaders is attested to through a certificate or other device, such tests and examinations are necessary. Otherwise they should not be given.

Some Extension workers may feel that such tests are necessary to determine what clientele know. Knowledge of what the clientele know is necessary for planning the instructional program. But it can be obtained without subjecting the learners to individual tests. In Extension, the instructor must develop the intellectual skill necessary to determine if the *learners understand or practice* what he is teaching without burdening them with tests which are unpleasant to most people.

Item 7, "Analysis of an educational experience by students using a well designed post-questionnaire," has limited application in teaching lay clientele. An instructor may purposefully conduct a learning experience incorrectly in order to stimulate a group of professionals who are requested to criticize the performance. Such a practice is not generally adapted to the instruction of laymen.

A logical and simple method of classification consists of grouping techniques as (*a*) semiformal, (*b*) formal or, (*c*) special.

a. Semiformal Evaluation—Adapted to work with

Table 1. Levels of evaluation by broad categories, instruments appropriate, and by Extension workers typically involved

Levels	Instruments appropriate	Extension workers involved
Habitual but unorganized		
1. Habitual but unorganized introspections by teacher relative to a teaching situation	.....	A common experience of agents and specialists
2. Panel or staff group who jointly and informally review a teaching situation without a list of questions or items to guide the review	.....	A not infrequent experience of agents, supervisors, and specialists
Simple guides		
3. Teacher's rating by means of a list of questions or items of his teaching relative to what he did and the effects on those being taught	Typical questions or items relate to the degree of interest shown, extent of discussion, teacher's degree of satisfaction, and concepts or skills teacher thought were learned as judged by attention and discussion	Conducted by either agents or specialists with assistance, where needed, from Extension studies specialist in preparing list of questions or items
4. Observations of a teaching situation by an individual or by those taught, guided by a list of questions or items	Typical questions or items relate to attention of students, kinds and extent of each student's participation, judgments by observer of quality of teaching	Conducted by either agents, supervisors, or specialists with assistance, where needed, from Extension studies specialist in preparing list of questions or items
5. Observations of a teaching situation by a panel guided by a list of questions or items	Typical questions or items relate to observe attention of students, kinds and extent of each student's participation, indication of teacher's objectives as revealed in teaching, teacher's management of discussion	Same as for (4) above
Reporting by students or teacher		
6. A system used by the teacher for reporting the learning of individual students	A typical reporting system: cards for each student or a form listing each student on which topics discussed and the teacher's judgment as to learning relevant to the topics are recorded; system would be used primarily in counseling	Jointly planned with Extension studies specialist, but conducted by agents or specialists

7. Analysis of an educational experience by students using a well designed post-questionnaire	Typical questions relate to the student's awareness of the teacher's objectives; ratings of methods used by the teacher; indications of useful concepts and skills learned; stimulation for further study; relation of learning to job requirements	Jointly planned with Extension studies specialist, but conducted by agents or specialists; Extension studies specialist may in some instances assume leading role in conducting evaluation
Post- or pre- and post-testing		
8. A post-questionnaire or test which ascertains the knowledge, attitudes, and skills of students resulting from one teaching situation	Typical instrument includes true-false, multiple-choice, and application (imagined or real) questions or items which sample expected knowledge, attitudes, and skills	Same as for (7) above
9. A questionnaire or test which ascertains knowledge, attitudes, and skills of students resulting from one teaching situation, administered before and after the teaching	Content of instrument similar to (8) above; questionnaire or test same for before and after	Same as for (7) above
10. A questionnaire or test before and after more than one teaching situation (often several as in a program extending over time) which ascertains the knowledge, attitudes, and skills of students resulting from the exposure; desirable to be accompanied by an in-put study	Content of instrument similar to (8) above; same for before and after; instruments for in-put study seek to find what was done in the teaching program; contact records containing reference to topics discussed, teacher's diary, and possibly participant observer's notes	Planned and conducted by Extension studies specialist with assistance from agents, supervisors, or specialists
Experimental design using control or comparative group		
11. A questionnaire or test before and after an educational experience (either one or more exposure) measures knowledge, attitudes, and skills; a similar pre- and post-testing of a matched control group; also a study of the educational in-put	Content of instrument similar to (8) above and the same for before and after; in-put instruments similar to (10) above	Same as for (10) above
12. Experimental study using a control or comparative group in which the educational experience (either one or more exposure), including methods, is planned for studying what happens to students; before and after questionnaires or tests are used; also a study of the educational in-put	Content of instrument similar to (8) above and the same for before and after; in-put instruments similar to (10) above	Same as for (10) above

Extension personnel and others, it includes:

1. Procedures involving checking performance or procedures by the teacher, another person or a group, comparing what was done or planned with what should have been done or planned.
2. Information from records, both public and private, such as reports of federal and state agencies, reports of sales, work by custom operators, and data of that kind. Extensive statistical treatment is not given.
3. Studies of small items with fewer than the number of schedules required for a *good* random sample without checking on contributing factors, such as age, education, and size of operator. Extensive statistical treatment is not given.

b. *Formal Evaluation*—Adapted to work with everyone.

This consists of studies which meet the standards for good social science research.

c. *Special Evaluation*—Adapted only to work with Extension personnel.

The term *semiformal* is preferable to *informal*, as the latter has a connotation indicating an absence of any organized procedure.

GUIDELINES FOR EXTENSION EVALUATION

Here are ten suggested guidelines for Extension evaluation:

1. A plan for evaluation should be built into the plan for instruction. This is necessary for two reasons: (*a*) So that evaluation will not be considered something "extra" superimposed from the outside, not necessary and, therefore, resented, and (*b*) So that objectives are so developed that they are best adapted to evaluation.

2. Techniques should be adapted to clientele—Extension personnel or others.

3. Evaluation procedures should be adapted to the competence of the evaluator.

Sometimes an inexperienced person has been pushed into a program of evaluation for which he was not prepared. Confusion and failure may have made that activity extremely distasteful to the worker and caused him to avoid evaluation in any form.

4. Clientele must be given the opportunity to practice what is taught before evaluating effectiveness.

Recall by the learner is not a measure of success or failure of Extension teaching. A person may be able to repeat "parrot-like" information, but practice exactly the opposite of what is repeated. What counts in Extension work is the *influence* of information on the *overt* action of the individual.

Extension workers do need to remember that time must be allowed for application before an attempt is made to measure effectiveness.

5. Extension studies should be conducted according to the principles of social science research.

6. Resource persons should be available.

Not all Extension personnel can become thoroughly conversant with the processes of scientific research. It is not necessary that they do so. It is advisable that in every state there be one person so trained who can help other personnel to lay out their formal studies so that the studies will meet the standards for recognized social science research.

7. One cannot evaluate all he does; therefore, generally it may be preferable to begin a system of evaluation by determining the situation. Most individuals will find the ready information inadequate for best program development.

8. Evaluation should be objective to the greatest extent possible. It is probable that no evaluating instrument can be constructed which does not include some subjectivity. However, subjectivity should be eliminated to the greatest possible extent. Therefore, the evaluation should be based on facts.

9. Each person should evaluate his own work. In addition, the supervisor should make some evaluation

of the work of each person he supervises.

10. As professionals, Extension workers should publicize their findings from evaluation.

PROCESS OF EXTENSION EVALUATION

In developing a program of evaluation, Extension workers are faced with two problems. First, they must decide what to evaluate; second, they must decide on the kind of evaluation.

Deciding What to Evaluate

It is not practical for Extension workers to evaluate everything that they do every year. It would, therefore, be advisable for each administrative unit to develop a schedule of evaluation. It is important that all persons in the unit, agents in the county or specialists in the project, participate in this planning. Quite often it will be desirable for all of them to participate in each formal study that is conducted. The amount of evaluation an operating unit can conduct efficiently and profitably has not been determined. The unit should establish a goal and then modify it with experience. Certainly it should be recognized that every person should evaluate something each year. A statement of what is to be evaluated should be included in the plan of work.

Deciding Kind of Evaluation

The decision as to the kind of evaluation is important. Sometimes the need for information is so urgent that a plan of semiformal evaluation is desirable. If a unit adopts the policy of making a formal evaluation of each of their major areas of work each ten years, then certainly there should be one or two semiformal evaluations in between so that a check can be made on the progress which is being achieved.

FOLLOW THROUGH

Following these decisions, the Extension worker is ready to: (*a*) develop procedures for collecting evidence of performance or results, (*b*) summarize the evidence, (*c*) interpret the evidence, (*d*) adjust operations according to findings, and (*e*) publicize the findings.

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Chapter 8

THE ORGANIZING STRUCTURE

In formal education a number of structural elements have been recognized and used.

> . . . Structural elements exist at several levels. At the largest level the structural elements may be made up of (*a*) specific subjects, like geography, arithmetic, history, handwriting, spelling, and the like, or (*b*) broad fields, like social studies, the language arts, mathematics, the natural sciences and the like, or (*c*) a core curriculum for general education combined with broad fields or with specific subjects or (*d*) a completely undifferentiated structure in which the total program is treated as a unit, as is found, for example, in some of the curricula of the less formal educational institutions, like the Boy Scouts or recreation groups.
>
> At the intermediate level, the possible structures are (*a*) courses organized as sequences, such as social science I, social science II, social science III, when these three courses are definitely planned as a unifying sequence, or (*b*) courses that are single semester or year units without being planned or considered as part of a longer time sequence. In the latter category would be ancient history in the tenth grade, modern European history in the eleventh grade, and American history in the twelfth grade, when each of these courses is treated as a discrete unit not having a part-whole relationship to the total history program. Correspondingly, typical ninth-grade algebra does not build upon eighth-grade arithmetic, nor does tenth-grade geometry build upon ninth-grade algebra so that we can think of these courses as discrete unit courses rather than viewing them as a sequential organization at the intermediate level.
>
> At the lowest level of organization, we have structures of several possible sorts. (*a*) Historically, the most widely used structure at the lowest level was "the lesson" in which a single day was treated as a discrete unit and the lesson plans for that day were more or less separate from other lessons which were planned for other days. (*b*) A second common structure is "the topic" which may last for several days or several weeks. (*c*) Increasingly, a third type of structural organization is to be found at this lowest level, commonly called "the unit". The unit usually includes experiences covering several weeks and is organized around problems or major student purposes[1]

The structure of instruction in the Cooperative Extension Service is simple, consisting of four items, (*a*) a program, (*b*) a plan of work, (*c*) a teaching plan, and (*d*) a plan for each learning experience.

Each may require a written instrument. A brief description of each will be presented.

THE PROGRAM

The program, often referred to as the "long-time program," should be designed to cover a period of five to ten years. Should there be a drastic change in the situation, the long-time program immediately should be revised. The program should contain several items of specific information.

The program should begin with a description of the general situation, the major problems that are evident, possible solutions, and general and long-time program objectives.

A second section should contain a statement concerning each major area of interest. This statement should include an elaboration of the situation concerning that particular area, the major problems that are involved, possible solutions, and intermediate program objectives.

The procedure used in developing the program should be described in some detail. There might be included a statement concerning the sources of information, the approach that was made, the number of meetings that were held, and other information of that kind.

Finally, the names of all of the persons involved, either as participants or as consultants, should be made a part of the program.

Manifestly, it will be necessary that the program be short and concisely presented.

A program should be developed by each administrative unit in the Cooperative Extension Service, and often for each major interest in the unit.

THE PLAN OF WORK

The plan of work should be a very simple, short document prepared by each individual and submitted annually. The items included should be thought through with co-workers and should fit into the total Extension

program of the unit. It should consist of an enumeration of the items which will be given major effort, the evaluations that will be made, and plans for professional improvement.

The attempt is often made to combine the program statement, the plan of work, and the teaching plan. Actually such efforts are self-defeating as the document prepared usually serves no useful purpose.

TEACHING PLANS

A teaching plan is the blueprint that the Extension worker prepares for instruction. All planning for instruction is brought to a focus in this document. It is the climax of planning for the learning process.[2]

There are five specific reasons for developing a teaching plan:

1. It helps the worker to avoid omitting essential steps and essential subject matter.
2. It helps to place learning experiences in proper order.
3. It helps in keeping emphasis on the major items to be covered.
4. It may serve as a calendar of work.
5. It gives the new worker confidence.

The teaching plan consists of these elements:

1. A brief review of the situation.
2. A statement of the specific teaching objectives.
3. A statement of the specific subject matter to be taught.
4. An outline of the procedure followed in developing the plan.
5. A brief statement of the major factors influencing the selection of learning experiences. (When practical, the learning experiences to be provided should be arranged in the order of their use and with tentative dates.)
6. A plan for evaluation.

A number of factors will influence the extent to which each of these elements will be presented in a teaching plan. A teaching plan developed only for the

use of the worker may be somewhat different from a teaching plan prepared to be presented to a supervisor. The extent of the review of the situation will depend on how much material has been previously presented in a program. The extent to which standard operating procedure covers good Extension methods will determine other details. For example, it could be understood that in the counties all open meetings will be advertised by a letter, a news item and a radio spot and reported to the public in one or more ways.

A teaching plan should be developed for each major item to be emphasized in the Extension program. It is desirable to select a very few teaching objectives, possibly not more than one to three, for major emphasis. A teaching plan should be developed on each of them.

If the specialist has been involved in the development of the plan, which is very desirable, it may not be necessary for him to have a copy. In the case of mature Extension workers, it is very doubtful that the supervisor should receive a copy. It should become standard operating procedure for teaching plans to be developed for all major items to be included in the program.

Examples of Teaching Plans

Teaching Plan No. 1 presents a purely theoretical situation which might exist in any Southern state. It takes a rather simple problem, in a not-too-complicated situation, and develops a teaching plan which might be worked out by a less experienced Extension worker.

TEACHING PLAN NO. 1
To Increase Participation in the Program of Breeding Dairy Cattle Artifically in Rolling Hills County

THE SITUATION

Dairying is the major agricultural enterprise of the county. According to the last census, there are 180

commercial dairymen milking 9,548 cows. Dairying, however, is relatively new in the county. In the last 25 years, there has been a decided shift from row crops to dairying and beef cattle.

Ninety-five per cent of the dairymen are Anglo-Saxon and Protestant. Five per cent are Negroes. About 2 per cent are college graduates; 10 per cent are high school graduates; 68 per cent have 4 to 10 years of formal education; 10 per cent have less than 4 years of formal education; about 10 per cent are illiterates. Approximately 25 per cent of the dairymen are not more than 39 years old; 50 per cent are 40 to 50 years old, and 25 per cent are over 50 years old.

The county maintains a functioning Extension Program Council to assist in developing programs with several subcommittees, one of which, of course, is dairying. According to the dairy subcommittee, these are the greatest problems affecting dairying:

1. Low milk production per farm.
2. Low milk production per cow.
3. High cost of producing milk.

The committee recommended that artificial insemination be given major emphasis for two years.

A study showed that the lowest production per cow for any herd in the county was 2,184 pounds. The highest herd averaged 9,175 pounds per cow. The primary reasons for low production per cow are poor breeding, improper feeding, and poor management.

It is believed that the low participation in the program of artificial insemination is due to (*a*) scarcity of telephones, which has made communications difficult; (*b*) some difficulty with breeding technicians; (*c*) lack of appreciation of the importance of productive capacity in dairy cattle; (*d*) resistance to change.

There is one Artificial Insemination Association in the county which last year bred 1,503 cows for 112 individuals. The association has been operating in the county for more than 10 years and employs two technicians. Semen is furnished free by a bull stud operated by a foundation. Semen is also available from a reputable commercial stud. The association charges $6 for each first service with one repeat service free of

charge. Ninety-six dairymen are members of the association.

From discussion of local dairymen and a look at their records, it is estimated that it costs $10 to breed a cow naturally.

The quality of the bulls used for natural breeding by the dairymen of the county is poor. There is not a proven bull in the county. A semiformal study indicated that 25 per cent of the bulls used were registered, but not of outstanding breeding; 50 per cent were "purebred," but not registered, and 25 per cent were of nondescript breeding.

In the Out Back neighborhood of Oak Grove community, Mr. Nicholas Jones practiced artificial insemination from the beginning of the program. He participated without enthusiasm for three or four years, but bred only a few of his cows. A previous inseminator was not too satisfactory; he and Mr. Jones had a rather serious disagreement. Mr. Jones discontinued participation and in a little while both of his sons, two sons-in-law, and seven of his neighbors also discontinued. In the Salem neighborhood of this same community, Mr. Ralph Sims had breeding trouble some four or five years ago and also quit participating. He operated a bulk truck and his neighbors depended on him to get word to the technicians. Soon four of his neighbors also quit.

Extension Situation

There are in the county a young county agent, an associate county agent, a home demonstration agent, and assistant home demonstration agent.

The Extension Service has a fairly good reputation. We have an office in the courthouse which is about as spacious as could be expected. Each of the agents has a small individual office and there is a reception room for visitors and for the one full-time secretary. We have a hand-operated mimeograph machine which is in good condition.

Facilities Available

Two daily papers have subscribers in the county, but it is difficult to get articles in these papers. There is one weekly paper in the county which has a good circulation, and publishes most news items submitted

by Extension personnel. A telephone system is under construction. When it is completed, practically all of the farms will have an opportunity to obtain telephone service. There is no radio station in the county. However, there is one in an adjoining county which is some 15 miles from headquarters. We do not have a regular radio program, but can arrange for special programs with proper contact with the station. There is a television station about 60 miles away. We do not have a regular TV program. In fact, we have very rarely participated in TV programs. Every farm in the county has a radio in working condition, and 95 per cent of the farms have TV sets in working condition.

Research Available

There is ample evidence that artificial insemination, where it is available at reasonable cost, is by far the most practical means for most dairymen to increase the productive capacity of their cattle. It is also a commonly accepted fact that home-raised milk cows are usually by far the most satisfactory, if they are properly bred and properly raised.

Status of the Practice

Twenty-six of the dairymen breed all their cows artificially and keep no bull; 20 breed artificially approximately three-fourths of their cows; 15 breed fewer than 75 per cent, but not more than 50 per cent, and the remainder who participate breed less than 50 per cent of their cows artificially.

Thirty-eight of the dairymen who breed three-fourths or more of their cows artificially seem well satisfied, are enthusiastic about the program and have participated for five or more years.

Status in Diffusion Process

Since there has been an association in the county for several years, we may reasonably assume that all of the dairymen know that such a service is available. We can reasonably assume, therefore, that they are beyond the awareness stage in the diffusion process. About 25 per cent have adopted the practice; 8

per cent are at the trial stage; 10 per cent have tried and rejected; and 20 per cent are in the interest and evaluation stages.

THE PROGRAM OBJECTIVE

To increase the productive capacity of the dairy cattle of Rolling Hills county through a program of artificial insemination.

THE TEACHING OBJECTIVE

For the dairymen of Rolling Hills County:

To acquire the knowledge that artificial insemination is the cheapest, safest, most convenient program of breeding cattle, with less danger of infection from disease, and offers a means through which the service of bulls of far superior quality can be obtained.

To follow the practice long enough to prove its superiority.

THE EVALUATION

Each learning experience will be evaluated for: (*1*) planning, (*2*) execution, (*3*) effectiveness. Effectiveness will be determined from observations and informal reports. No effort will be made to determine the change in people from any one educational experience.

Overall effectiveness will be determined by the number of dairymen participating and the number of cows bred.

Goals for 1967—105 dairymen breeding 1,800 cows.
1970—125 dairymen breeding 2,500 cows.

PROCEDURE

1. Held conference in county with District Agent to secure suggestions.
   He agreed to:
   a. Review circular letters and news items and get them checked in state office.
   b. Attend one or more activities to help check on progress.
   c. Assist county agent to train technicians in how to visit farmers.

d. Come to county to:
   1. Address annual meeting of the association.
   2. Assist county agent in training technicians to visit nonparticipants.
   3. Attend the first three neighborhood meetings and make suggestions.

e. Check circular letter for content.
f. Request dairy specialist to prepare and supply pedigrees of bulls in the state stud.
g. Send special material as it is available.

2. Obtained a list of all of the dairymen in the county from the milk truck operators.
3. Had a called meeting with the board of directors and the technicians. At this meeting the farm of each dairyman was spotted on a large county map. At the home of each participating dairyman, we placed a red pin; at the home of nonparticipating dairymen, we placed a black pin. At the home of the dairymen who had been members of the association, but who had quit, we placed a white pin next to the black pin.
   (Several members of the board of directors felt that with proper contact, these who had quit would resume participation.)
4. Analyzed records of WADAM and DHIA participants to secure records of daughter-dam comparisons. Charted for use at meetings, office calls, etc.
5. Arranged for a conference with the state Extension radio specialist. He agreed to lend a tape recorder and to visit the county to train the county agent in its use.
6. Met with the board of directors of the local association. They wholeheartedly endorsed the idea of increased emphasis on artificial insemination.
   They agreed:

   a. To invite all dairymen and their wives to the annual meeting, which would end at noon with a barbecue.
   b. To buy $10 worth of tapes for radio programs.
   c. For the president to visit Mr. Jones and Mr. Sims.
   d. For the technicians to visit all nonparticipating dairymen.

7. Met with the dairy specialist to obtain from him suggestions on methods, research data, and material which he has available or will prepare.
   Specifically he agreed to:
   a. Prepare, with the director of the bull stud, four four-minute radio tapes on:
      1. Quality of Jersey bulls in stud.
      2. Quality of Holstein bulls in stud.
      3. Quality of Guernsey bulls in stud.
      4. Quality of beef bulls in stud.

      These tapes are to be placed in the Extension tape library.
   b. Prepare four-minute tapes on advantages of artificial insemination:
      1. Safety.
      2. Disease control.
      3. Convenience.
      4. Cost.

      (These tapes are to be placed in the Extension tape library.)
   c. Prepare and supply news items covering the above topics.

Factors Considered in Selecting Learning Experiences

Several factors influenced the selection of learning experiences:

(1) Practically all of the dairymen could read, and therefore the use of circular letters and news items was practical. There were available a full-time secretary and a mimeograph machine.

(2) The weekly paper was rather widely subscribed to and read.

(3) Although there was no radio station in the county, there was one not too far away, and it was felt that through the use of tapes, short radio programs could be made a valuable part of the teaching plan.

(4) It was felt that the dairymen who had been in the program for several years would have dam-daughter comparisons in their herds which could be used as local proof of the adaptability of this practice.

(5) Since all of the dairymen had undoubtedly heard about the program, it was decided that the greatest effort would be made to prove the value and practicability of the program so the dairymen would move into the interest, trial, and adoption stages.

(6) Since the dairymen are primarily middle-aged and older, they will react slowly. Hence, the plan to give major emphasis for two years in succession.

(7) Local leadership by the president of the association and by the breeding technicians was available.

Learning Experiences Planned for the First Year

JANUARY

15 farm visits by county agent to satisfied participants to:

a. Check on dam-daughter comparison.
b. Determine the practicability of a meeting.
c. Determine possible date for a meeting.
d. Determine who will be invited.
e. Select animals to be kept in barn for the meeting.

3 news items by county agent on planning the dairy farm program:

a. Feed production and feeding practices.
b. Management.
c. Growing replacements.

3 radio programs on same subjects.

2 circular letters by county agent to all dairymen:

a. Feeding and feed production.
b. Growing replacements.

30 office calls: Will discuss program with all dairymen who call at office, fitting discussion to state of participation.

1 meeting with technicians to train them in making visits.

30 visits by technicians to nonparticipants.

FEBRUARY

15 farm visits to satisfied participants by county agent. Same purposes as in January.

30 visits to nonparticipants by technicians.

30 office calls: discuss program with dairymen as they call at the office.

4 radio programs, using tapes from state office.
Subjects: Advantages of artificial insemination in:

1. Cost.
2. Safety
3. Convenience and ease (no bull to care for).
4. Disease control.

4 news items: Same subjects by county agent quoting state office.

1 circular letter from county agent on planning to produce replacements.

MARCH

15 farm visits by county agent. Same purpose as January, to same type of people.

20 visits by technicians to nonparticipants.

30 office calls: Discuss program with those dairymen who call at the office.

1 assembly of heifers at courthouse for transportation to state show. (Point out those artificially bred and raised in county.)

1 news item by associate county agent on showing made by artificially bred heifers in state show.

1 radio talk by associate county agent on same subject.

APRIL

2 visits by president of association (to Mr. Jones and Mr. Sims).

8 neighborhood meetings at farms of satisfied participants to see daughter-dam exhibits and discuss advantages of artificial insemination.

10 office calls: Discuss program with dairymen who call at the office.

10 visits by technicians to nonparticipants.

4 news items by county agent quoting men at whose farms meetings were held.

4 radio programs using tapes made at meetings.

MAY

8 neighborhood meetings. Same purpose as April.

4 news items quoting men at whose farms meetings were held.

4 radio programs, using tapes made at meetings.

10 visits by technicians to nonparticipants.

10 office calls: Discuss program with those who call at office.

JUNE

8 neighborhood meetings. Same purpose as April.

4 news items quoting men at whose farms meetings were held.

4 radio programs using tapes made at meetings.

JULY

1 news item by county agent advertising state sale of artificially bred heifers.

1 radio program advertising state sale of artificially bred heifers.

1 news item reporting on sale, with emphasis on prices received for heifers from county.

1 radio program (same subject).

10 office calls: discuss program with dairymen who call at the office.

AUGUST

1 circular letter from president of breeding association extending invitation to all dairymen and their wives to attend the annual meeting of the association.

1 annual meeting of association, to which all dairymen and wives are invited, all agents participating.

1 news item advertising meeting.

1 radio program advertising meeting.

1 news item reporting on the meeting.

1 radio program reporting on the meeting.

SEPTEMBER

1 circular letter from county agent on quality of bulls in state stud.

4 radio programs on quality of bulls in state stud, using tapes from state office.

4 news items on quality of bulls, quoting state office.

OCTOBER

12 4-H Club meetings held by associate county agent. At each meeting visit a farm to see dam-daughter comparisons, if convenient. If not, use picture of such comparisons.

1 circular letter from the county agent, summarizing statements of satisfied participants.

Teaching Plan No. 2 is also developed from a theoretical situation which could exist in any Southern state.

By our standards a good Extension dairy program has been conducted in the county. The county agent is a good individual with his master's degree in Extension education. The plan attacks a difficult problem.

TEACHING PLAN 2

To Increase Participation in the Weigh-A-Day-A-Month Program in Good-Enough County

SITUATION

Dairying is the major agricultural enterprise in the county, accounting for 75 per cent of the agricultural income. There are approximately 425 dairymen in the county. Dairying is a relatively new agricultural enterprise. It began during the 1930's, but had its greatest period of development during the early 1940's. In 1959, 5 per cent of the dairymen had been selling milk for more than 30 years, 7 per cent from 20 to 29 years, 43 per cent from 10 to 19 years, and 45 per cent less than 10 years.

The People

In 1959, 39 per cent of the dairymen were 50 years old or over, 57 per cent were 30 to 49 years old, and 4 per cent were under 30. Ten per cent of the dairymen are college graduates, 35 per cent are high school graduates, and 15 per cent have less than 12 but at least 9 years of schooling, and 40 per cent have not more than 8 years of formal education.

Of the 425 commercial dairymen, 16 are Negroes and the remainder are white. Twelve have German ancestors and all other white dairymen have Anglo-Saxon backgrounds. Eight of the dairymen live in town and operate through a manager on the farm. Twelve have purebred herds.

Average milk production per cow is increasing slowly. In 1959, it was 5,200 pounds per cow; in 1969 it was estimated at 6,400 pounds per cow.

The dairymen are progressive in many ways. They breed artificially the highest percentage of their cows of any county in the state.

Status of Record Keeping

In 1967, 46 farmers were keeping individual cow records. Thirty-nine were in the WADAM, 6 were in DHIA and 1 was in HIR. DHIA has been emphasized in the county for many years. The WADAM program

was introduced in 1957. Farmers enrolled rather slowly. The agents made some individual calls and learned that they could induce most dairymen to sign up for participation and pay for a year's service in advance. They noticed, however, that in three or four months a majority stopped sending in their records and dropped out of the program. These visits were discontinued three years ago. The program is discussed and recommended at meetings, through mass media, and otherwise as there is opportunity. The agents observe, however, that the number of participants is slowly increasing. Some three or four drop out each year, but some five or six come in each year. Usually, these new participants have observed a neighbor, friend, or relative who is participating and who is particularly well satisfied with the program.

About 10 per cent of the dairymen weigh their milk periodically, but keep no accurate records. It is estimated that 16 weigh their milk regularly and keep records, some of which are more extensive than those kept under the WADAM program.

Extension Situation

The Extension Service maintains a County Extension Program Council. There is a committee on dairying made up of fourteen members. Eight of the fourteen members participate in the WADAM program. This committee meets at least once a year and in most years meets more than one time. In 1966, this committee agreed that the following were the major problems facing dairymen in the county:

Insufficient forage production.
Improper feeding of concentrates.
Lack of sufficient milk production records.
Improper milking procedures.
High investment, inefficient utilization of facilities and high labor costs.
Drain on resources by too many unprofitable cows.

These problems have guided the Extension personnel in their dairy Extension program from that date. Each year the agents report to the committee on the work done the previous year and discuss with them which

of these problems should be given priority in the following year.

During the last two years, a great deal of effort has been given to forage production and the proper feeding of concentrates. The committee has suggested that keeping of individual cow records be given emphasis in the immediate future.

Prior Extension Program

"Farm and Home Development" has been carried on in the county since its inception. Growing out of this program, there was begun in 1955 a united effort to increase the net income of dairymen through what came to be known as the Dairy Progress Program. Under this program, commercial as well as agricultural interests were mobilized to focus attention on the dairy program and to encourage participation in those measures which would bring about improvement.

Production standards were established through the advice and counsel of the dairy specialists of the Cooperative Extension Service. Through experience, these standards were modified by the committee during the first few years. Dairymen were encouraged to enroll in the program and to set standards for themselves. Record books were furnished. A motto of "Seven thousand pounds by 1970," was adopted. Plans were made for honoring "Superior Dairymen" who had an average production of 10,000 pounds or more per cow. Each year there is an annual meeting to which all dairymen and their wives are invited. This meeting is held on a participating dairy farm. In addition to an educational program, certificates are presented at that time. A barbecue luncheon is served.

One of the ideas emphasized in the Dairy Progress Program was the fact that costs must be considered by the dairymen. By 1962, the Dairy Progress Program and the WADAM program became fused.

For two years at the Annual Dairy Progress meeting, emphasis has been given to the economic side of dairying, particularly the need for individual cow records as a basis for making management decisions. The combined records of those dairymen who have participated in the program for five years or more are used as a basis for discussion. These dairymen have in-

creased production and decreased costs about twice as fast as the average dairyman in the county.

Extension personnel were somewhat disappointed in the participation in the WADAM program and in the Dairy Progress Program. It has been extremely difficult through the years to maintain participation in the DHIA. It was, therefore, greatly hoped that the WADAM program would be sufficiently simple and inexpensive to bring about widespread participation. This was not the case.

Nonparticipation in the Weigh-A-Day-A-Month program was quite puzzling to Extension personnel. In discussing the matter among themselves, the agents and subject matter specialists agreed that these factors might be important:

1. Lack of formal education.
2. Lack of understanding of how to use the records.
3. Time required to weigh the milk and fill the forms.

With these objections to participation in mind, the agents modified their program. Three years ago they began visiting each dairyman as he received his first record to show him how to use the record in making management decisions. Two years ago they established a 4-H Club project in dairy record keeping, believing that through this means, some dairymen who were pressed for time or who had a small amount of formal education might be able to participate. Of course, it was realized that keeping dairy records would be a very valuable work experience for any boy or girl.

Normally the county agent and associate county agent hold six series of meetings with dairy farmers during a year. These meetings are held in the homes of dairymen out in the county. Seven meetings are held in each series. In December of each year for the last three years, the meeting has been devoted to dairy records. A good many dairymen keep records of costs and returns for income tax purposes. Rather generally, these are spoken of as "shoe box records." All dairymen in the county are invited to these meetings. A suggested summary sheet is enclosed with the letter of invitation. In addition, the farmer in whose home the meeting is being held makes a list of twenty-five or thirty farmers in the neighborhood whom he thinks

might be interested and who might participate and to whom he extends an invitation. At these meetings, each dairyman is assisted in filling out his summary sheet so that he may be able to compare his records with those of other farmers present. The county agent usually presents the records of one outstanding dairyman and compares them with the standards which were established for the Dairy Progress Program. Quite often, the neighbors compare records with each other.

One meeting on dairy records is then held at the courthouse, to which those dairymen are invited who did not have the opportunity to participate in a meeting in one of the homes. A careful check of the persons who attend these meetings indicates that there are about one hundred farmers who attend any series of meetings, and that somewhat fewer than half of the dairymen in the county ever attend a meeting.

The meetings in the communities are never held in the same home as the previous meeting. However, it has been noticed that about the same number of people attend regardless of the homes in which they are held. There are a few exceptions.

The county and associate county agent send six circular letters to dairymen annually. Individual cow records and WADAM are mentioned in more than one.

The county agent maintained for a time a regularly scheduled radio program. It was discontinued when it was learned that the principal agricultural area of the county was not reached by the station.

FACILITIES AVAILABLE

There is one daily paper and one weekly paper in the county. The county agent writes a regular column in the daily paper and other personnel write a column in the weekly paper. Spot news items are submitted to both.

There is a radio station, but no agricultural program is maintained. There is no TV station in the county, and personnel rarely participate in a TV program.

There are several radio stations in the state capital city to which the people in the county listen regularly. The TV broadcasts from the capital city are viewed by farm people regularly.

RESEARCH AVAILABLE ON PARTICIPATION

A formal study made in the county in 1965 showed that participating dairymen had a net income $1,702 larger than nonparticipating dairymen of the same herd size.

Formal studies in DeSoto and Tangipahoa parishes of Louisiana showed no correlation between participation and age, size of operation and education. Participating dairymen had been in dairying fewer years than nonparticipators. Both participators and nonparticipators quoted the time required to weigh the milk and to fill out the forms as primary factors in nonparticipation.

PROCEDURE

Because of the importance of the work and the previous program which was not as successful as desired, the county agent decided to seek counsel in planning work on WADAM. He requested first a conference with the district agent.

The district agent reviewed the excellent dairy program in progress. He and the county agent discussed very freely the leadership situation in the county. Since new participants in the Weigh-A-Day-A-Month program largely came from contact with a participating dairyman, they wondered if local leadership among the dairymen was being utilized to the fullest extent possible. The county agent also called to mind the fact that in a few cases attendance at a home had been unusually small, and yet the host dairyman had later been chosen as a leader in some organization. They also called to mind the fact that only about half of the dairymen were attending meetings. This lack of attendance indicated incomplete participation in the Extension dairying program. They therefore decided to ask for a joint conference of a dairy specialist, and the Extension sociologist, with county personnel to review the situation more fully.

At this conference, previous findings were reviewed and it was agreed that further utilization of local leadership among the dairymen might be the best approach to the solution of this problem. It was decided further that the agents would concentrate on those dairymen

who did not attend meetings. It was suggested that a list of these men be made by communities and neighborhoods. The Extension sociologist pointed out that there undoubtedly was a pattern of leadership among this group. He pointed out further that this pattern of leadership could be determined by a rather thorough study. He also pointed out that parish personnel could, over a period of time, through careful observation, determine a good deal of this leadership themselves.

The Extension sociologist did add that record keeping or getting farm people to keep records is one of the more difficult problems with which the Cooperative Extension Service deals. Not only dairymen, but many other people in business keep as few records as possible. There appears to be almost a built-in human resistance to them. It was also pointed out that since dairymen were making progress, apparently many of them were obtaining the standard of living which was satisfactory to them, and therefore the necessity for such records had not been generally accepted. He also pointed out that possibly the standard of full participation by every dairyman all the time was unrealistic. He wondered if it were necessary to test all cows all of the time to secure sufficient records for reasonably successful management. He asked if it might be sufficiently accurate to test only the cows which come into production the first time, or to test all cows every other year or every other month. The dairy specialist and agents agreed to give this matter further consideration and to discuss the problem with personnel in dairy production research.

PROGRAM OBJECTIVES

Short-term objectives: (1) To increase participation in the WADAM program. (2) To consider the advisability of changing the standard of participation from continuous to every other year. (3) To learn more about the leadership pattern among dairymen who do not attend meetings.

Teaching objective: For dairymen to understand that individual cow records enable a dairyman to reduce costs and increase profits about twice as fast as can be done without them.

EVALUATION

Each learning experience will be evaluated for: (1) Planning, (2) Execution, (3) Effectiveness. Effectiveness will be determined from observations and informal reports. No effort will be made to determine the change in people from any one educational experience.

Overall change will be determined by the number of dairymen participating.

The goal for 1970 is for twenty-five additional dairymen to begin participation.

WORK PLAN FOR FIRST YEAR

(1) Begin discussion with the dairy committee of the County Program Council such questions as: What should be the standard of performance for dairymen in the WADAM program? Should they be expected to participate continuously, every other year, or every third year? Should only freshening heifers be tested? What problems do participating farmers face?

(2) Spot the residences of all dairymen on a large map, using white pins for those not participating in any records program, and red pins for those who are participating.

(3) Begin determining the leadership pattern among the dairymen. Lay out on the map the pattern of neighborhoods and contact two to five dairymen in each. In each case, ask them such questions as: (*a*) Whose opinion do you most value as a dairyman? (*b*) Whom do you consult for dairy information? (*c*) Whom do you watch most carefully in their dairy operations? Make observations of individuals who work together and exchange implements and work. Make observations of family groups and of whether they are particularly compatible. Make a record in each case of the responses to these questions and of the groups who are otherwise defined. As meetings are held, make a record of the persons the farmer invites to his home. In addition, keep a record of those persons who attend the meeting. Through all of these measures make an effort to determine the pattern of leadership among the dairymen who are not attending dairy meetings.

(4) To establish a result demonstration on WADAM

in fifteen neighborhoods with a dairyman who does not attend meetings, but who has been identified as a leader. Race, place of residence and similar factors will also be considered.

(5) Visit each new participant the first month after he receives his first record and every second month thereafter during the first year.

(6) Send four radio tapes on WADAM to the state capital stations, at least one of these tapes to emphasize the successful experience of dairymen in the county with the program. Give their names and encourage farmers to visit them.

(7) Devote one circular letter to names of enthusiastic participating dairymen and suggest that friends and neighbors visit them to discuss the value of the program.

(8) Reduce the number of series of dairy meetings from six to four.

(9) Continue other learning experiences as in past years.

THE INDIVIDUAL LEARNING EXPERIENCES

A standard of performance should be developed for each learning experience and each activity essential in developing the instructional program. A detailed plan should be prepared for performing each learning experience or any other activity.

An example is a checklist on planning a meeting.

A General Meeting

I. Planning and preparation

- A. Is a meeting the best way of providing the learning experience?
- B. Develop a definite objective.
- C. Is the subject timely (seasonal)?
- D. Is the subject of interest to people who can attend?

E. Arrange the hours for the convenience of those expected to attend.
F. Select an appropriate place.
G. Advertise appropriately (three or more ways if an open meeting).
H. Advertise the length of the meeting.
I. Arrange an agenda and provide a copy for each speaker.
J. Give each speaker a time allotment.
K. Discuss the overall objective:
   1. With each speaker.
   2. With the chairman.
L. Adapt the type of program to the subject matter.
M. Adapt the type of program to the audience.
N. Plan semiformal evaluation.

II. Holding the meeting
A. Arrive fifteen minutes before the beginning to be sure everything is in order.
B. Begin on time.
C. End on time.
D. Provide comfort for those attending.
E. Be certain they can see.
F. Be certain they can hear.
G. Arrange for visuals that are appropriate.
H. Practice use of visuals.
I. Encourage discussion.
J. Be certain all equipment is in working order and that you can handle it with ease.
K. Arrange for local participation:
   1. A chairman
   2. Successful farmers to give experience.
L. Hold the speakers to their allotted time.
M. Select only speakers who are well-prepared and competent.
N. Make and record semiformal evaluation.

Even the most experienced Extension worker should not overlook the importance of this action, as it will more nearly assure performance in keeping with that of a professional.

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Chapter 9

THE INSTRUCTIONAL PROCESS IN OPERATION

Before presenting an example of this instructional process in operation, we must clarify the relationship of the process to community, rural and area development.

Community, rural and area development are each a method of leading people to the consideration and development of all their resources. Each may be undertaken by Extension workers operating independently of other agencies. However, rural and area development do require the coordination and cooperation of all agencies of government to be most effecitve. The principles of analyzing the situation and involving people in selecting objectives, as described here, are applicable in community, rural or area development. The Cooperative Extension Service, after the program has been agreed upon, should find that it has a definite educational responsibility. This instructional process should then be applied by Extension workers to carry out that responsibility.

WORK WITHIN ADMINISTRATIVE UNIT

Any Extension worker may apply the instructional process described here. However, it will be easier for an individual to follow the principles outlined for the instructional process if it is carried out by all persons in the administrative unit of which he is a part. This process of instruction in Extension may require the development of new intellectual skills by Extension workers. Association with persons following the same approach will be mutually stimulating and beneficial. Instruction in the Cooperative Extension Service does need an enthusiastic approach. Enthusiasm is contagious. The larger the unit which follows this process, the greater will be the advantage to each individual. In other words, it is advantageous for an entire state

Extension organization to move out in this approach to Extension instruction. If a state, however, does not see fit to operate in this way, it will be good for a district or area to adopt and follow principles discussed here. And if the Extension district or area does not make this approach, it yet will be practical for a county to do so. A subject matter project may do so. If his coworkers do not feel it necessary or desirable, the method even can be undertaken by an individual.

It is possible that in a few states Extension workers on the state or district level may encounter some difficulty in securing approval for the selection and use of a committee of personnel for planning purposes. Probably, however, few executives would object where an individual wished to demonstrate the effectiveness of this approach.

From a state standpoint, it would be most desirable for the director to decide, after proper counseling, that this instructional approach will be the model for that state. He and the training personnel should then set the example by their operations. As the director develops plans for his own work in this way, he automatically will lead the persons responsible to him, usually the associate or the assistant director(s) or state agents, to do the same. They, in turn, by their example as well as by their instruction and leadership, will bring about the adoption of the process by the persons responsible to them. As the state agents set the example and train the personnel responsible to them, the projects will follow the example. And, as the associate director applies the process, district teams will do likewise and, eventually, will the counties.

The training staff should begin the practice concurrently with the director, and thus be prepared through experience as well as training to be of assistance to other personnel.

For successful operation of this process, a training program will be necessary. Administratively, such a training program should be established in the beginning. Suggestions will be made concerning such a program in the next chapter.

ADVISABLE OPERATIONS

Generally, the following operations will be advisable in the use of this instructional process in the Cooperative Extension Service:

A. Assemble and analyze data on the general situation.

B. Decide on clientele groups and establish priorities.

C. Develop general and long-time program objectives as part of administrative planning.

D. Consider and decide how clientele can be involved in selecting program objectives.

E. Identify resource persons and determine how they should be involved in the selection of objectives.

F. Train participants.

G. Secure data and analyze the situation by homogeneous groups of clientele.

(As teaching groups are selected, information must be obtained about practices which they follow. These practices need to be compared with a standard, which must be established. And, from this standard, it can be determined what practices should be recommended.)

H. The Extension worker needs to determine as closely as possible why people do what they do. Is it because of what they know or don't know? Is it because of how they feel? Are resources available? With this information, quite often it will be necessary to review the standard and to adjust it.

I. The situation and the general and long-time program objectives should be reviewed with the clientele or their representatives. The general and long-time program objectives should be adjusted to conform with the thinking of the clientele.

J. From a review of the situation and the general and long-time program objectives, problems will become quite evident. These problems

should be reviewed with the committees. The research that is available and the courses of action that are open should be discussed also.

K. The problems which are within the province of Extension should be selected. Other problems should be referred to other agencies and organizations for action.

L. Determine some intermediate objectives.

M. This material thus assembled should be brought together into a program of Extension work for the particular unit involved. The program statement should not be voluminous. It should contain only essential and very relevant information. All detail should be omitted.

N. Annually, with the advice of those concerned, a few intermediate objectives should be selected for major consideration.

O. Program objectives for these particular items should be determined. Occasionally, it will be desirable to include program objectives not known about or approved by the clientele.

P. Teaching plans should be developed for each major program objective for the year.

Q. The teaching plans must be executed with precision.

EXAMPLES

For the purpose of presenting examples of the process in operation, personnel of the Cooperative Extension Service are divided into four general classes:

1. Executives
2. Supervisors
3. Staff
4. Agents

Most of the activity of the first three classes (executives, supervisors, and staff) will be with other Extension workers. The class of "agents" as used here consists of those persons in Extension who serve educationally a clientele not employed by the organization.

The great emphasis which herein is placed on the instructional process by executives, supervisors, and

the staff, is based on the assumptions that: (*a*) most Extension personnel are doing as well as they know; (*b*) most personnel would like to do a better and more efficient job; (*c*) education is the best process for influencing personnel to improve performance; (*d*) most personnel are working, they are giving full time to the job; and (*e*) every rank and position in the organization is important.

The Process Applied By An Executive

The chief executives of the Cooperative Extension Service are the directors and/or the associate directors. Generally, in a state Extension Service, the chief executive officer is the director of Extension. Theoretically, the director of Extension is responsible for all of the work of the organization. Were it possible, he would do all of the work. Since that is not possible, he divides responsibility and authority with other personnel. His specific activities are determined by him and they vary with the knowledge, training, ability, and desires of the individual. Quite often, however, the chief executive and other executives spend most of their time on policy development, financing, organization, and public relations.

The director should always set an example. We sometimes seem to forget that imitation is one of the basic ways of learning.

As stated previously, the ideal is for the chief executive and training staff to apply this instructional process to their activities and then work it down through the organization.

The director should develop a standard of performance for his own activities. What should he do, annually or periodically, on policy development, finances, organization and public relations? When? These specific activities should be discussed with both his superiors and those who are responsible to him. He should receive and consider suggestions from both groups.

The director should work with those responsible

to him in developing a standard of performance for their jobs. Usually the director has associate or assistant directors, and sometimes state agents, directly responsible to him. Each of those individuals should be led into making a careful analysis of his job and to the establishment of certain specific activities which should be carried out. The executive should then help them to develop long-time objectives for their work and they should be given the opportunity to concentrate their activities on those items.

After these long-time objectives have been developed, intermediate and short-time objectives should be selected. Annually, the director should set aside a time for a conference with each of the persons responsible to him. At this conference they should review the situation, review the goals that were established the previous year, review accomplishments, discuss reasons for failures, and decide on objectives for the coming year. During this conference, the director may receive from them suggestions as to his own work. It is entirely possible that failure to reach goals was due to unwise policy, inadequate finance, poor organization, or some other failure which can be attributed partly to the work of the director himself.

Faculty councils are established institutions for resident instruction in many colleges and universities. They are a useful device in university administration. In states where the subject matter specialists have professorial rank and are administratively responsible to the subject matter departments, they participate in these councils. Thus, the personnel are divided, some having a privilege which others do not enjoy. Such a condition is not desirable.

South Carolina has an Extension council. It is composed of the president of the university, the dean of the university, the dean of agriculture, the director of Extension and his administrative staff, district and associate district agents, specialists, county agents, county and assistant home demonstration agents, and other members duly elected as provided for in the bylaws.

The purpose of the council is to provide participation of Extension personnel in the consideration of Extension policies and procedures and to provide channels for Extension personnel to make recommendations to the executives and board of trustees of the university.

The constitution provides for an executive, welfare, and Extension organization and policy committee. The executive committee serves as a senate. Membership in the senate from all ranks of the organization is provided for in the constitution.

The council meets at least annually. Special meetings are provided for.

The senate meets at least semiannually, and special meetings are provided for.

Any member of the council may present problems or suggestions to the senate. Committees may function on their own initiative and they may consider problems that are referred to them.

Through the operation of this council, every member of the organization has an opportunity to make recommendations concerning activities of the executives of Extension and of the university.

The Process Applied By Supervisors

To this writer, administration and supervision are primarily functions and not positions. He believes that many people in the organization have administrative and supervisory functions. However, it is generally considered in Extension that state agents and district agents have primarily supervisory responsibilities.

Considerable thought and effort have been directed during the last twenty years to the job of the supervisor in the Cooperative Extension Service. However, most of this focus has been on the district agent rather than upon the state agent. Most of this effort has been directed to categorizing the jobs which the supervisor performs, securing his opinion of their relative importance, and determining the relative importance attached to them by those supervised.

In all of this activity the primary focus has been upon producing change in lay people. Very little attention has been given to the factors associated with change in professional personnel. And, yet, the supervisors in Extension are dealing with professional personnel. A great deal of research has been done on techniques of adult education, in agricultural, vocational, and nonvocational Extension work, but very little research has been done on motivating professional personnel.

The Development of Standards. In the application of the instructional process in Extension to professional personnel, one of the more difficult problems is the development of standards.

District agents can receive valuable assistance from the Federal Extension Service. Raudabaugh, building on the work of Leagans, has developed a series of bulletins, "Guidelines for County Extension Program Development and Evaluation," including:

Section A—Evaluation of County Extension Work, General Statement of Guiding Principles
Section B—Current County Situation
Section C—Organization for Program Development
Section D—Process for Program Planning
Section E—Evaluation of County Extension Work
Section F—County Extension Program Action
Section G—Accomplishments of County Extension Program and Check Sheet for Indicating Responsibilities for County Extension Program Development

These bulletins will be of great assistance to any district agent desiring to move into this area.

Standards for the county Extension program (process and product) could be developed by a district team over a period of years. The process to be used is worth describing in some detail.

The first year the district team established as its primary objective the development of a better understanding of and better performance of the program development process by county personnel. They studied the administrative policy statement on the program development process, the Scope Report, and "The Guide To Extension Programs For The Future." They agreed that the subject matter areas presented in "The Guide To Extension Programs Of The Future" were a satisfactory basis for organizing the subject matter content of county programs. They agreed that it would be desirable to review with each county staff their program and plan of work. In preparation, they developed criteria to be used as a basis for this review and transmitted them to the county chairmen.

The district agents reviewed with the personnel in each county the program and plan of work which had been submitted.

The county chairmen were requested to devote one staff meeting to a review of the administrative policy statement on the use of county program councils.

Material relating to program development was prepared and mailed periodically.

Two training meetings were held during the year. A representative of the Federal Extension Service assisted in holding one training meeting covering the basic philosophy and process of county program development. The second training meeting was held by the district staff and was focused primarily on the development of the annual plan of work.

Each county chairman was required to submit a special report on program development activities in that county.

In the second year the team:

a. Prepared and mailed to each county written material on program development, suggesting that it be reviewed in county staff conferences.
b. Reviewed each county program and plan with all of the county staff and the district staff jointly participating. These were reviewed in the light of the organizational policy statement

on county program councils and the criteria which had been previously developed.

c. Conducted a training meeting with emphasis on the preparation of a written Extension program for each county.

d. Encouraged agents who planned to attend summer school to enroll in the course on program development.

e. Encouraged agents to provide training for chairmen of the Extension planning committees.

f. Held a series of district meetings to develop a format for a county program based on policies established and the subject matter areas covered by The Guide To Extension Programs Of The Future. This outline was reviewed and revised by the district staff and presented at a second series of meetings. Suggestions were made for revisions, which were included in the final outline.

g. Held training meetings at which emphasis was placed on the necessity for the plan of work to grow out of the major problems which were pointed up in the program, the teaching objectives to be stated in terms of the behavioral changes desired in people, and teaching methods and activities to be appropriate to these objectives.

As the county staffs studied the situations in their counties, including the needs, desires, and problems of the people, it became evident that the staff did not have sufficient information for wise decisions. They agreed that there was a need for studies to provide this information. A suggested study procedure was developed which would include the county staff, subject matter specialist, district agents, and local leaders in making such studies.

Near the end of the second year, the district staff made a semiformal study of the programming process of each of the counties in the district.

In light of the standards of performance, which they

had developed by that time, they asked these questions:

1. In how many counties does the staff have a reasonable degree of understanding of the programming process?
2. In how many counties is there an active and functioning program council and committees?
3. In how many counties are we proud of the progress which has been made in program development?
4. How many counties have obtained a very high degree of effectiveness in their programming procedures?

During the third year, each county program and plan of work was again reviewed by the district team. Emphasis was given to the organization and functioning of the county councils, preparation of situational statements, and development of program and teaching objectives and methods. A schedule of studies was developed by each county.

After this review, the district team concluded that it would be advisable to develop an outline which could be used in presenting Extension programs and plans of work. The outline was developed and forwarded to the counties for their use the next year.

During the fourth year, the county program and plan of work for each county was again reviewed by the district staff. The format was checked against the outline which had been suggested. Policy statements and criteria previously developed were used as a basis for discussion.

Agents were again encouraged to enroll in formal summer school classes in program development.

Emphasis was given also in the program review to the methods which were used to reach the objectives. The necessity of selecting methods for a specific audience and for expected changes was emphasized.

Experience during the year indicated that there was need for additional suggestions on guidelines and format for the development of the county program and plan of work. To that end, the district staff developed a set of "Guidelines For Extension Program-

ming." Here is how they proceeded:

1. Old guidelines were reviewed at a meeting of county chairmen, where suggestions for changes and additions were requested.
2. From this discussion, the district staff prepared tentative guidelines which were presented at the next meeting of county chairmen.
3. These tentative guidelines were taken by the county chairmen to the counties, where all staff members were involved in their discussion.
4. Suggestions were brought from the counties to the next meeting of chairmen, were discussed, and recommendations were made.

These guidelines were mimeographed and sent to county personnel. It was agreed that they would be used as the basis for developing the county program during the next year.

At a meeting of county chairmen in January of the following year, further revision was made in the guidelines and they were unanimously adopted as the standard of performance for the district.

A bulletin was prepared for the use of personnel.

The content of such a bulletin is not significant except to those who developed and will use it. No supervisor should use guidelines developed by some other group in some other area. In no case should arbitrary decisions be made concerning a standard of performance. The persons who will do the performing should have an opportunity to review, revise, and agree upon what is applicable and desirable. The guidelines developed by any group are not perfect. They do however form a basis for operation, and from them improvement may be made through the years.

The Process Applied By Staff Personnel.

Subject matter specialists make up a large part of the state Extension staff in most states. There is here presented an example of how an agronomist responsible for pasture work could proceed. For simplicity he will be referred to as a pasture specialist.

A pasture specialist (if no one else in the project was following this process) would proceed as follows:

1. Prepare a statement on the value of pastures.
2. Review the general situation with regard to livestock numbers, farmers with pastures, basic pasture practices, soils of the state and persons who make recommendations on pasture production and utilization.
3. Prepare a statement on the essentials for successful pasture production.
4. Examine the resources of Extension.
5. Prepare a statement of general and long-time program objectives.
6. Decide on clientele and establish priorities.
7. Decide how clientele can be involved in selecting objectives.
8. Decide on resource people, and how to utilize them.
9. Examine county pasture programs.
10. Determine knowledge and skills of county personnel in Extension pasture work.
11. Develop intermediate objectives.
12. Summarize prior activities.
13. Set date for committee meeting.

What Good Pastures Offer The Farmer

A pasture specialist must first keep clearly in mind the advantages good pastures offer the farmer. A statement might include these facts: (a) pastures will produce a pound of total digestible nutrients more cheaply then any other feed crop; (b) pastures utilize land not suitable for row crops; (c) pastures do not compete with most cultivated crops for labor; (d) the use of pastures in the rotation plan assists in controlling undesirable plants and plant diseases; (e) pastures in the rotation help build soil fertility; (f) pastures make good use of human labor because machinery can be used in their development, maintenance, and use.

The General Situation

According to the 1960 census, there were 75,450 farmers in the state who had one or more cows. They owned more than a million cows of breeding age. These

farmers had 4,724,000 acres of open pasture. It was estimated that there were 31,260 farmers in the state with five or more animal units in beef cattle, dairy cattle, or sheep. No attempt was made to estimate the amount of pasture that was used by swine growers.

According to the 1960 census, 21 per cent of the cattlemen used fertilizer on some pasture. Ten per cent of the pasture land was fertilized and 6.7 per cent was limed.

The soils of the state vary from those which are fertile, containing all of the plant food necessary for pasture production, to very infertile coastal plain soils, containing very little of the elements that are needed. Both drainage and erosion are problems in the state.

On the state and county level there are many people who are making recommendations to farmers on pasture production. They include:

1. County agents and associate and assistant county agents.
2. Other Extension specialists—livestock, dairy, soils, farm management, entomology, and plant pathology.
3. Other professional personnel—state and area personnel of the Soil Conservation Service, personnel of the Soil Conservation Districts, state and county personnel of the Farmer's Home Administration, vocational agriculture teachers, ASC county office managers, and commercial agricultural workers.
4. Nonprofessional personnel—salesmen and operators of custom equipment.

Essentials for Successful Pasture Production

A. Soils must be used which have sufficient fertility, natural or developed, for good forage production.
B. Adapted grasses and legumes must be used in proper combination.
C. Good production practices must be used in establishment and maintenance.
D. Good utilization entails grazing to capacity only, grazing in rotation, and clipping for hay as needed, and for economy.

Extension Resources

There are on the state staff these specialists: pasture (1), dairy (4), general livestock (6), soils (2), management (2), entomological (3), and plant pathology (1).

In each county of the state there is one county agent. There are assistant or associate agents in more than one-half of the counties, who work primarily with adults.

The state editorial office prints most of the publications requested; sends out suggested news items, radio spots and radio scripts; maintains a radio tape library and has a weekly television program in which all state office personnel have an opportunity to participate.

Pasture research is being conducted at a central station and at eight substations, with one located in almost every section of the state.

There is a good working relationship among the specialists on the state office staff, the research personnel, personnel of other agricultural agencies, and the other groups whose members make recommendations on pasture production and utilization.

The pasture specialist has actively assisted with the planning of the ASC program.

General and Long-Time Objectives

On the basis of this situation, the pasture specialist developed these general objectives:

For each farmer in the state to review his situation and develop a pasture program that fits his needs and capabilities.

For pasture fertility programs to be based on a soil test and the research information available.

For lime and fertilizer to be used as needed.

For all pasture cover to include the plant varieties and combinations adapted to the area.

For all new pastures to be established through proper preparation of a seedbed and by being seeded, sodded, or sprigged at the right season and in the right amounts.

For weeds to be controlled as needed and by the most feasible method.

For pastures to be grazed in rotation and according to capacity.

For pastures to be renovated as needed to maintain optimum grazing.

For excess growth to be used for hay or silage.

As a means of reaching these general objectives, long-time program objectives were developed:

For all Extension personnel, state and local, to wisely include work on pastures in their program.

For the ASCS program to be properly planned.

For the recommendations of all agricultural workers to be based on the best information available.

For commercial interests to make available to producers the materials and supplies of the kinds recommended.

Decision On Clientele And Establishment Of Priorities

Just who are the clientele of a pasture specialist in this state? Are they the 75,000 farm operators? Is the specialist's clientele primarily made up of the county, associate and assistant agents? Are other Extension specialists included in his clientele? Are all other professional and nonprofessional people who are making recommendations on pasture part of his clientele?

It is assumed that the chief executive officer of the organization will make the final decision on primary clientele. However, it is advisable to review some of the factors influencing this decision.

Harvey and Scheneman, as reported by Zettle in the Journal of Cooperative Extension, say: "Thus the state specialist is seen primarily as a teacher of county staff members."[1]

Granted that the primary function of the state subject matter specialist is to teach county personnel, should not his program be designed to influence county Extension pasture programs?

Recently, in discussing this matter, one state agent said, "I consider all of the cotton farmers of the state the primary clientele of the cotton specialists on the state staff." How could they be? These cotton farmers are also the primary clientele of the county, associate, and assistant county agents. Has there been no division of responsibility? If the cotton farmers of the state, or in this case, the livestock producers of the state, are the primary clientele of the pasture specialist, then he needs immediately to begin a program to get assigned to him 15 to 20 assistant pasture

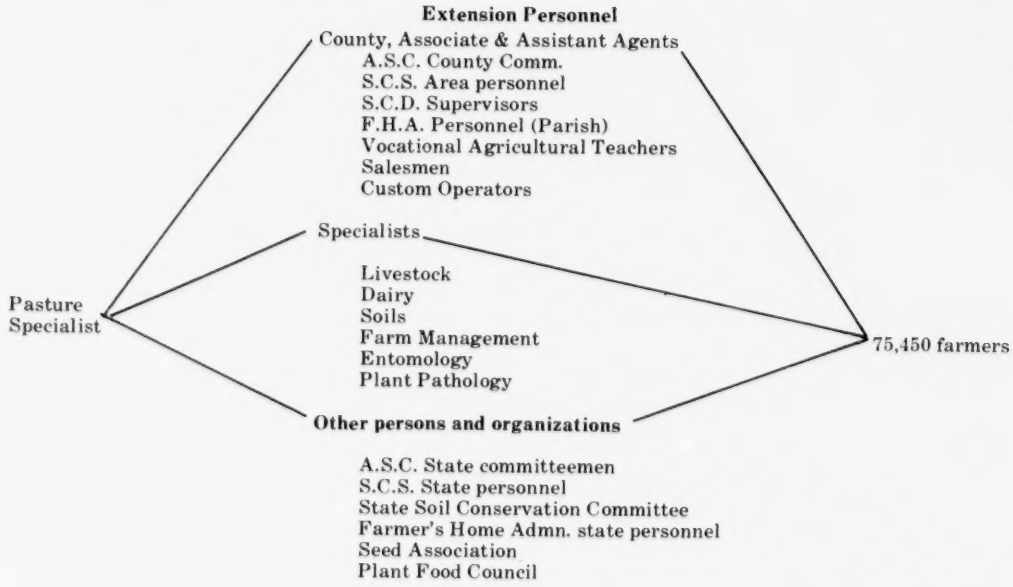

TABLE 1.—Possible clientele of a pasture specialist with state-wide responsibilities.

specialists located out in the state in order that he may do an effective job with the farmers who need to develop and utilize pastures. If such a practice is followed, of course, immediately the horticulturists will make the same request, the dairy specialists will make the same request, and, in fact, all of the other specialists will make the same request. The impossibility of this system of operation becomes evident very, very quickly.

On the other hand, can a subject matter specialist ignore other groups in the state? Frankly, this writer doesn't think so. For example, the pasture specialist in some states is called upon to be an advisor to the state ASC committee. He has a responsibility to work with the Plant Food Society and with the state organizations of seedsmen and fertilizer dealers. In selecting clientele, however, he needs to be careful that he does not assume that all agricultural workers are his primary clientele. It has been assumed in some states that county personnel have a responsibility to the other agricultural workers in the counties to keep them abreast of technical information. It is assumed that these people will be utilized in the development of county agricultural Extension programs. It may then be desirable and feasible to set up both primary and secondary clientele for the pasture specialist.

His primary clientele would consist of the county, associate, and assistant agents of the state. The other specialists on the state staff who are interested in pastures might either be considered clientele or they might be considered resource persons to assist in the development and execution of a good pasture program (Table 1).

It is probable that the ASC State Committee, ASC state personnel and district personnel, the state Soil Conservation Committee, state personnel of the Farmer's Home Administration, officers and directors of the state seedsmen's association, and the officers and directors of the state plant food council also should be included as primary clientele.

There are a great many other persons interested in pastures who are making recommendations concerning them, but they are primarily the clientele of county Extension workers. These might be included as secondary clientele, if so desired. They would be the

ASCS county office manager, the ASCS area personnel, supervisors of the Soil Conservation Districts, county personnel of the Farmer's Home Administration, vocational agriculture teachers, fertilizer and seed salesmen, clerks in fertilizer and seed stores, and custom operators.

Assuming that it is agreed that the county, associate and assistant agents are the primary clientele of the pasture specialist, he must then examine them and their work very closely.

Unfortunately, subject matter specialists have, in many cases, been most unfairly described as narrow-minded individuals interested only in their particular field of work. They have been pictured as promoting their subject regardless of conditions in the counties. This may be true in some states. However, most state specialists desire that their work be *wisely included* in county Extension programs and that conditions in the state be favorable for the use of the information that is made available.

The pasture specialist determines that there are several conditions necessary for county personnel to *wisely include* pasture work in their county program. For them to do so they must: (*a*) know the situation in their county, (*b*) know what pastures offer to livestock producers, (*c*) have a pasture committee operating as a part of a program council or livestock committee or subcommittee which will consider pastures, (*d*) have the applicable technological information, (*e*) know how to plan and execute learning experiences to teach pasture information so that the farmers will apply recommendations when it is to their advantage.

Decide On How Clientele Can Be Involved

The pasture specialist decides that it is advisable to involve his primary clientele in developing objectives for his program. He, therefore, requests and receives approval for establishing a state pasture committee of county Extension personnel made up of three persons from each of the Extension districts. He works out with each of the district agents the way in which these men will be selected and a plan of rotation of pasture committee membership.

Decide On Resource People

He decides that it would be advisable to involve two resource persons, one from agronomic research in the state and one from Extension Service, USDA. His request for such resource persons is approved and they are appointed.

In order to train the participants, he visits each of them individually (except the person from Washington) and discusses with them exactly what he has in mind. He gives each of them a statement of facts concerning the pasture situation in the state as he has found it. He requests a visit from the representative of the Extension Service, USDA, to discuss his plans.

Examine County Pasture Programs

It is now necessary that he secure data concerning the status of pasture programs in the counties, in order that he may develop a sound concept of what a county Extension pasture program should be. In his opinion, the most important factor in determining what a county pasture program should be is the need for pastures. After some consideration, he assumes that a county that has 100 or more owners with one or more head of livestock and 3,000 acres of open pasture would be considered to be one where pastures are of major importance. In a county with fewer than 100 cattlemen and less than 3,000 acres of open pasture, but with some cattlemen and some pasture, pastures would be considered of minor significance. Based on this arbitrary standard, he determines that in 67 of the 75 counties of the state, pastures are of major importance, in 7 counties they are of minor importance, and in one county of no importance.

After consideration, he further decides that in counties where pastures are of major importance every year some work should be done on that subject. He further decides that once in five years, pastures should be given a major effort by Extension personnel. He defines "major effort" as one in which at least five ways of providing learning experiences are included in the program in that year. During the other four years, it is expected that at least two types of learning experiences would be included.

Where pastures are of minor importance, he sets as a standard that in one year of each five the agent would include at least three types of learning experiences on pastures and that every year the topic would be mentioned at least once or at least one learning experience would be provided.

Determine Knowledge And Skills Of County Personnel

He develops a standard of knowledge which county personnel should have: (*a*) acreages, (*b*) treatment that is needed, including lime, fertilizer, drainage, etc., (*c*) the types of plants that should be used, including varieties, methods of establishing, etc., (*d*) a knowledge of the weeds that are common and methods of control, (*e*) advantages of rotation grazing, (*f*) evidences of overgrazing, (*g*) how to plan pastures according to the needs of the operator, (*h*) the practices which farmers are following. From his knowledge of county personnel acquired over a period of years, he concludes that all of the agents have some knowledge of pasture production, management, and utilization but that only 50 per cent of the agents are adequately trained in this field.

A review of county plans of work shows that in approximately 35 per cent of the counties, personnel have adequate knowledge of the practices being followed by the farmers in that county. This review further reveals that 25 per cent of the agents plan to study the pasture situation in their counties during the next five years. This review also shows that 85 per cent of the counties either have a separate committee on pastures or their livestock committees have considered pastures in planning the Extension program.

He makes no effort to determine the competence of the agents as teachers of pasture information because he feels that standards for this activity are inadequate and his knowledge is too limited. A review of county plans of work over a five-year period indicates that all agents during the five-year period had included pastures to some extent in their programs. However, according to the standard that was established, only 50 per cent of them had conducted in any year a program that could be considered adequate. It was observed that most of them had included in most years

less than five learning experiences relating to pasture practices. It was particularly noted that only a very small percentage of the agents ever included any work on the factors to be considered in developing the needs for pastures by an individual producer.

Develop Intermediate Objectives

From this analysis, the specialist concludes that the immediate greatest needs of work with the county personnel on pastures are: (*a*) to increase their technical competence, (*b*) to teach them how to plan individual pasture programs with producers according to their needs and capabilities, (*c*) to increase knowledge of the pasture practices being followed, (*d*) to give them a concept of sufficient concentration on the subject to be effective.

He discusses his conclusions with the district agents. They offer cooperation and assistance.

Summarize Prior Activities

The pasture specialist could use this outline to record his activities of the previous year:

I. Assistance to agents
   1. Visits for planning.
   2. Meetings with program councils.
   3. Training meetings of personnel.
   4. Tours attended.
   5. Visits for meetings or other specific work.
   6. Visuals prepared and made available.
   7. Letters prepared for use of agents.
   8. Fill-in news item prepared for use of agents.
   9. Radio and television scripts prepared for use by agents.
   10. Radio tapes prepared and placed in tape library for distribution to stations.

II. Work with:
   1. Plant Food Council.
   2. Seedsmen's Association.
   3. ASC Committee.

III. Other work
   1. State Fair.
   2. Radio programs originating in state office.

3. TV programs originating in state office.

IV. Publications.
   1. New bulletins.
   2. Bulletins revised.

Set Date For First Meeting With Committee

Agenda for State Extension Pasture Committee, Date _____. Place: State Office.

1. Review general situation.
   Number of farmers
   Number of livestock and hay producers
   Livestock numbers
   Pasture acreage
   What pastures offer
   Basic practices being followed
2. Review critical factors in production and utilization.
3. Review general and long-time program objectives.
4. Review statement of what is needed to reach long-time program objectives.
5. Consider revisions of 2, 3, and 4.
6. Review activities of past year.
7. Review standard for county programs and situation with regard to county programs.
8. Consider revision of standard for county programs.
9. Determination of greatest needs.
10. Determination of kinds of assistance needed.

The Process Applied By Agents

Two teaching plans were presented in the previous chapter.

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Chapter 10

TRAINING FOR INSTRUCTION

Even a cursory examination of the instructional process described here reveals that a great deal of knowledge and many intellectual skills will be necessary for its most successful use. Such knowledge and skills can be obtained only through an extensive and intensive program of personnel training.

Collings has presented:

> (*a*) a brief historical review of the circumstances and influences which shaped the educational standards for employees through the first half century of the Service, (*b*) an analytical look at the educational status of Extension employees at all levels, and the use of opportunities and (*c*) an examination of the factors which are shaping the future actions of Extension training.[1]

Collings' excellent discussion will be supplemented by examining levels of competence in knowledge and skills needed, the areas of knowledge and skills needed and some means of developing and reaching training objectives.

LEVELS OF COMPETENCE NEEDED

Three levels of competence are recognized for work in the Cooperative Extension Service. They are the level of appreciation and interest, the level of the general practitioner, and the level of the specialist. It should be recognized at any given time that each person may need to be at each of these levels in one or more areas and that he must be at different levels in different areas.

Application and Interest

The level of appreciation and interest requires a person to know enough about the discipline to realize that it does exist and that it has applicability in Extension work. He will, therefore, attempt to see that persons with more need for this area of knowledge will receive training in that area. He should know

where additional knowledge can be obtained. He should be willing to seek out and obtain assistance in that area as he has need. He should know sources of technical assistance. He should have professional and intellectual honesty so that he will seek assistance as there is need.

For instance, every man in Extension work needs sufficient knowledge of home economics to appreciate its significance and the conditions which require additional competence in that discipline. Every woman in Extension work needs a similar knowledge of the agribusiness complex.

Levels of the General Practitioner

The concepts of the general practitioner and the specialist are borrowed from the medical profession. The general practitioner in medicine is trained in all of the ills which afflict the human body. He is given sufficient training so that he can diagnose and treat those which are common. He is, however, given the professional and intellectual honesty to realize his limitations, and, therefore, when he reaches a problem which is beyond his competence, he seeks the assistance of a person better trained to diagnose and/or treat that particular illness.

Level of the Specialist

The practitioner who is a specialist is trained in general, but has given long and continuous study to a limited area of illnesses or illnesses of a certain kind. His services are called upon when illness is baffling to the general practitioner or when the extent of knowledge or expertise needed is beyond that of the general practitioner. So, in Extension the specialist has general training in many areas, with great depth in one or more.

As stated previously, generally in Extension work every person will be at each of these levels in one or more areas of knowledge and intellectual skill.

AREAS OF COMPETENCE NEEDED

Areas of knowledge and skill needed by Extension workers include:

Technology

Rather generally in Extension work, technology has been the designation given the physical sciences. Here the term is used with a much broader connotation. It is defined here as those areas of knowedge of particular applicability to the job of the person concerned. Agriculture, home economics, and subjects very closely related thereto have been the "stock and trade" of Extension workers. In recent years, training in the social sciences has become more prevalent.

To executives, technology means competence in the areas of administration. To supervisors, technology means competence in personnel management, and sufficient knowledge of the work of those supervised to be able to train them and evaluate their performance and efficiency. As a rule, a staff person is a specialist in some area of knowledge. This specialization does not obviate at all the necessity of general knowledge in many areas.

To the "workers," technology generally means one or more areas of agriculture, home economics, or marketing. It may mean a knowledge of consumer education. To others, it may mean knowledge or intellectual skill in the social action processes. The job determines the technology needed for that position.

Unfortunately, many persons in instruction in the colleges have developed the attitude of "either, or." "Do you want technology or methods?" they ask. Actually, the Cooperative Extension Service has reached the point in its development where it is not a question of "either, or," but of the necessity for *both*.

While it is impossible to list the areas of knowledge in the order of their importance to Extension workers, technology was deliberately chosen as first in this dis-

cussion. Actually, with technology alone, the worker as a rule can service a small percentage of his clientele. Usually this small percentage is the most persistent and vocal of the clientele. With technology applicable to the job, the Extension worker can at least accomplish something, while little or nothing can be accomplished without it. Innovators and early adopters in Cooperative Extension work are the persistent kind who seek out Extension personnel and constantly press them for more information. This places great pressure upon workers on the job to be able to answer all questions or fill all of the needs of this particular group. The persistence of this group has given the impression to some that, generally, Extension's potential clientele today are open and waiting for information. Some say that the only need is to bring them the answers to their problems and the information will be readily received and applied. There is no foundation in research that this writer has been able to find to justify this opinion.

Competence in technology may be thought of as encompassing: (*a*) up-to-date information in subject matter fields pertinent to the job, (*b*) identification and effective use of resources (specialists and others), (*c*) ability to stay current through sources of research findings, and (*d*) ability to interpret and use research.

The Cooperative Extension Service

Personnel cannot develop loyalty to something with which they are not acquainted. It is necessary that personnel come to feel that they are a part of something worthwhile, an organization with a glorious past and a challenging future. Hence, a knowledge of the history of the organization and its alliance with the university and the U.S. Department of Agriculture is necessary. This area of knowledge should include:

a. Why there is a Cooperative Extension Service.
b. History of the United States Department of Agriculture.

c. The origin and development of the Land-Grant College System.
d. History of the Cooperative Extension Service.
e. Legal base, scope, functions, and general objectives of the Cooperative Extension Service.
f. Organizing for the work (federal, state, district and county).

Sociology

Extension works with people. Human beings are gregarious. The society of which a person is a part greatly influences what he can and will do. Knowledge of the society and social systems is needed in properly determining and evaluating the situation for the purpose of establishing priority of clientele, selecting objectives, selecting learning experiences, and leading clientele to group action where individual effort is inadequate or less effective.

The interrelationships of man in the society of which he is a part are contained in the discipline of sociology. Such information is of extreme value to Extension workers.

Inclusive, but not exclusive, is information on:

a. Man as a social being.
b. The family, educational system, system of government, type of economy, and means of recreation and their influence.
c. The power structure, cliques, control groups, clubs, and other voluntary organizations.
d. How to identify local culture (social, race, and other status groups).
e. Value systems and how to determine them.
f. How to identify, develop and use leaders; the types of leaders which are useful to different kinds of groups, both formal and informal.
g. How to involve people in determining their common needs and interests.
h. Group processes in securing desired action.

Economics

A knowledge of the social system will help determine what is practical from a human standpoint and a knowledge of the economic system will help determine what is practical from an economic standpoint. Suggested information includes:

a. The economic history of the United States.
b. Systems of providing goods and services.
c. Marketing systems.
d. Agricultural policy in the United States and its effect on the economy.
e. Utilization of agricultural resources for maximum efficient production, both physical and human.
f. Economic factors affecting farm prices and income.
g. Economic factors that should be considered on farms, in homes, and in industries.

Education and Psychology

Since Extension is educational, knowledge in this area is essential for all personnel. A knowledge of the following is important:

a. Principles of learning.
b. An overview of adult education programs with interrelationships.
c. How to motivate people.
d. The decision-making process.

Extension Instructional Process

Extension is a unique educational organization. A knowledge of its distinctive approach is essential for all personnel. Included are:

1. The Selection of Objectives
   a. A knowledge of Extension objectives, their development and use.
   b. How to determine clientele, determine the most desirable priority of clientele, determine

their objectives, and involve them in the selection of objectives.
   c. How to develop acceptable standards of performance.
   d. How to identify, clarify, and give priority to problems and objectives.
   e. How to sift objectives.

2. The Selection of Learning Experiences
   a. A thorough knowledge of each learning experience (how it developed and its importance).
   b. A thorough knowledge of the factors influencing the selection of learning experiences.
   c. Determination of specifications for good performance of each learning experience provided by the Cooperative Extension Service.
   d. Development of a plan for evaluating performance of each learning experience.
   e. Development of skill in the use of each learning experience.

3. Determination of critical resources that must be available to clientele and how they can be provided.

4. Becoming familiar with the criteria for organizing learning experiences and becoming competent in their application.

5. Becoming skilled in the evaluation of the situation, performance, learning experiences, and results.
   a. What is evaluation?
   b. What do we evaluate in Extension?
   c. Kinds of evaluation used by Extension.
   d. Processes used in evaluation in Extension.

6. Becoming familiar with the organizing structure and the development and use of the:
   a. Program.
   b. Plan of work.
   c. Teaching plan.
   d. Plan for each learning experience.

Communications

A knowledge of the language is necessary for successful functioning by a Cooperative Extension worker. A knowledge of communications is necessary for even the most rudimentary functioning. Moreover, some of the intellectual skills of communications are necessary as a means of providing learning experience to clientele. A knowledge of the following is necessary:

a. Language and semantics.
b. Oral communication (visiting, counseling, group discussion, speaking).
c. Written communication (letters, newspaper articles, bulletins, periodicals).
d. Radio and television.
e. Visuals (advantages, kinds, preparation, and use).

History and Philosophy

Extension personnel need an appreciation of their nation. They need balance and perspective which can be obtained through a knowledge of history and philosophy.

a. Ancient and modern civilizations.
b. Basic value premises of the nation and comparisons with other areas.
c. Citizenship and public responsibility.

Characteristics of Training Needs

It is very evident that the training needs of Extension workers must meet several requirements.

a. Both breadth and depth of knowledge will be required.
b. The areas of knowledge and intellectual skills required may be illustrated with an inverted pyramid. As Extension personnel move from apprenticeship through and up the ranks, the extent of such knowledge and intellectual skills increases in proportion to the area of responsibility.

c. Training should draw from several disciplines and may draw from many disciplines.
d. To even approximate the training needs of Extension personnel will require careful planning, time and expenditure of funds.
e. Apprenticeship can serve as only one method of training.

Development of Training Objectives

Because of variation in conditions in the administrative units of the Cooperative Extension Service, the approach to developing training objectives will vary in different states. However, these suggestions should be of value:

a. Begin with a training needs inventory.
b. Inventory prior training and needs of each new employee.
c. Develop a standard of knowledge and intellectual skills needed for each position.
d. Review and re-evaluate the training need of each person as each changes positions.

Making a Training Needs Inventory. The Report of the Task Force on Training Needs of the Cooperative Extension Service[2] has an excellent suggestion on making a training needs inventory. Such an inventory should be approached carefully with considerable preparation and with the intent to give it sufficient time and effort to make it worthwhile. The training needs inventory should begin at the top of the organization. Training personnel should set the example by making such an inventory for themselves and making it available to other personnel. The executives should then individually and collectively review their own situation and lay out their training needs. These should be made known to their entire staff. Those in each rank in descending scale in turn should make a careful inventory of their needs. This inventory should be reviewed by the appropriate supervisor and, when agreed upon, approved and filed for reference.

Inventory the Prior Training and the Training Needs of Each New Employee. No prospective or new employee should be embarrassed, but it should be made perfectly clear to him that the Cooperative Extension Service is a different kind of educational organization and, therefore, requires knowledge and intellectual skill not customarily associated with educational responsibility. It should be made perfectly clear to him that the Cooperative Extension Service is a dynamic organization, that it is changing over the years and that as it changes the knowledge and intellectual skills of its personnel must be broadened to include the new responsibility. Therefore, he should expect, from the very beginning, to study throughout his professional life. The standard of knowledge for the position for which he is employed should be reviewed. His prior training should also be reviewed. A plan for training him for that particular position should be developed.

Develop a Standard of Knowledge and Intellectual Skills for Each Position. From the training needs inventory, and with the cooperation of the persons concerned, supervisors should develop a standard of knowledge and intellectual skills for each position in the organization. These should be in writing and should be in sufficient detail to serve as a guide in determining the training needs of new employees and of other employees as they change positions.

Review and Re-Evaluate Training Needs of Each Person as He Changes Positions. Because of the pressure of the job and the great emphasis on apprenticeship training, the policy of retraining the staff member for each position to which he is appointed has not been universally practiced. Only through such a process can the personnel of the organization remain competent for the positions which they occupy.

Development of Training Needs and Resources

An adequate training program will require facilities and resources. These will require both policies and

personnel. There should be a proper balance, but personnel and facilities should be made available for: (*a*) graduate programs, (*b*) semiformal in-service training, and (*c*) self-study.

Graduate programs in departments of Extension education should be arranged by most state Extension services. In a few cases, the smaller states may jointly develop such departments. The staffing of these departments will depend upon the responsibility of department personnel for the semiformal training program. It should be the goal to have all of the personnel in these departments trained to the level of the doctorate.

A number of states should develop departments of Extension education to give training to the level of the doctorate. Their primary emphasis should be on the degree of the Doctor of Extension Education. Generally, the degree of Doctor of Philosophy is too narrowly structured and oriented too much toward research to be the most effective training for Extension workers.

Extension personnel need an optimum of both depth and breadth of training. They need an appreciation of research and sufficient knowledge of research methods to be able to study scientifically their situation and the results of their teaching. However, it is not necessary that all of them be specialists in research procedures. The Extension worker is primarily concerned with the application of knowledge rather than its acquisition. In addition, the usual requirement of a reading knowledge of two foreign languages is inappropriate, since very little is written about Extension in languages other than English.

In some cases, these departments should be a part of the college of education rather than the college of agriculture. In that case, more than one curriculum should be developed. While the training needs of personnel in all adult education have some features in common, there should be a minimum of required courses.

These departments must be primarily planning agen-

cies for guiding each student in developing his program. The department should be expected to teach a limited number of courses especially designed for personnel of the Cooperative Extension Service. They must be free to draw from many disciplines and must resist the urge to proliferate courses and require a maximum number of courses in education.

A considerable amount of in-service training of Extension Service personnel will continue to be informal in nature. It will be made up of the day-to-day contacts of personnel with their supervisors, specialists, and other professional people. However, a proportion of training set up on a more formal basis is desirable. Short courses and workshops set up on a basis of concentration of 12 to 18 hours of instruction will greatly strengthen the program. Each participant should be required to read assignments between sessions and prepare papers. Grades should be given and made a part of the personnel record of the individual.

Every Extension worker should continue to study throughout his professional life. To this end, the training staff should prepare reading lists which are made available to the personnel concerned. For self-study to be effective, a library will be required. Therefore, the sources of this reading material should be made available with the lists.

Real professional societies whose meetings help the member to grow in competence have been developed by Extension to only a limited extent. A good many staff members participate in a professional technical society, but these meetings are heavily oriented toward research. For professional societies and journals to be most effective, Extension personnel must lose some of their reticence. Unfortunately, too many Extension personnel refrain from recording and publicizing their experiences for fear they will give the impression that they are conceited and boastful. It is one of the marks of the professional that in all humility he makes any new knowledge obtained available to all others in the profession.

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APPENDIX

General objectives for:

A. Home Demonstration Work Nationally
B. Home Demonstration Work in Minnesota
C. Home Demonstration Work in Onondaga County, New York
D. 4-H Club Work Nationally
E. 4-H Club Work in New Jersey
F. 4-H Club Work in Niagara County, New York

A. General Objectives for Home Demonstration Work Nationally

(From "A Guide to Extension Programs of the Future.")

"Certain factors help to create a satisfying home and a congenial relationship among family members and within the community. Education for family living aims to provide these factors by helping families develop:

1. An understanding of human needs and aspirations.
2. An appreciation of the increasing complexity of family choices in the use of time, money, energies and abilities.
3. The ability to balance family needs and goals against family resources as a basis for decision-making.
4. An appreciation of how research and factual information can be used in making sound family decisions.
5. Knowledge of sources of qualified guidance and help.
6. An appreciation of how the health and well-being of the family are influenced by adequate and attractive food, clothing and housing.
7. An awareness of the need for people generally to assume leadership responsibilities.
8. An understanding of the precepts of good citizenship."

B. General Objectives for Home Demonstration Work in Minnesota

Minnesota developed these objectives for the Home Economics Extension program (Furnished by Frank M. Forbes, 9/27/62):

"The objectives of the home economics Extension program are to assist families to acquire the knowledge, attitudes and abilities so they may achieve:

A. Satisfying and wholesome family life. This includes the care and development of children, and meeting the needs of adults and the aged.
B. Effective use of time, money, energy in providing the necessities of food, clothing, and shelter, and in achieving family individual goals.
C. The ability to apply the *decision-making process* in all aspects of life.
D. Judgment and skill as a buyer in the consumer market, based on an understanding of the marketing system and the family's influence as a consuming unit.
E. Competence in those homemaking skills which continue to be useful in maintaining satisfying and wholesome family life.
F. Effective participation in the community, its organizations and services."

C. General Objectives for Home Demonstration Work in Onondaga County

Onondaga County, New York, developed these objectives for the home economics program of the county (Furnished by Arthur E. Durfee, 10/3/62):

1. Help people in the county (including Extension Service cooperators) to gain a clearer understanding of the home demonstration department, its purpose, philosophy and operation.
2. Help people to a better understanding of the many kinds of help and information they as individuals, as families, as groups can obtain from the Extension Service.
3. Provide specific opportunities in the area of home economics and related subjects for homemakers to participate in activities which will

lead to satisfactory solution of problems.

4. Help people recognize opportunities for adapting and using information gained through the Extension Service.
5. Help homemakers develop their leadership ability. Promote leadership as a continuing role within the unit and community.
6. Assist homemakers in determining their true problems and concerns and in the analysis of the implications of these problems and concerns as related to the home demonstration program.
7. Help individuals develop a greater sense of responsibility for the Extension Service program by increasing opportunities for people to experience personal satisfactions which came from sharing information and cooperative endeavors.
8. Provide opportunities for homemakers and their families to become acquainted with community resources and help them develop the ability to select valid information in the various subject matter areas."

D. General Objectives for 4-H Club Work Nationally

(From "A Guide to Extension Programs of the Future."):

"The primary aim of the 4-H program and other Extension work with young people is to provide opportunities for mental, physical, social and spiritual growth. Informal education provided by the Extension Service uniquely supplements the training received in the home, church, school, and other youth-serving agencies.

"Specifically, the Extension youth program has the objectives of helping young people to:

1. Acquire knowledge, skills, and attitudes for a satisfying home and family life.
2. Enjoy a useful work experience, together with the responsibility and satisfaction of personal accomplishment.
3. Develop leadership talents and abilities to achieve their citizenship potential.
4. Appreciate the values of research and learn scientific methods of making decisions and solving problems.

5. Recognize the importance of scientific agriculture and home economics and their relationships to our total economy.
3. Explore career opportunities in agriculture, home economics, and related fields, and recognize the need for a continuing education.
7. Appreciate nature, understand conservation, and make wise use of natural resources.
8. Cultivate traits of healthful living, purposeful recreation, and intelligent use of leisure time.
9. Strengthen personal standards and philosophy of life based on lasting and satisfying values.
10. Gain attitudes, abilities, and understanding for working cooperatively with others."

E. General Objectives for 4-H Club Work in New Jersey

These objectives were developed for 4-H and other youth work in New Jersey (Furnished by James B. Fawcet):

"In more specific terms, the Extension youth program aims to help young people to . . .

1. achieve—experience balance between frustration and success.
2. understand and fulfill their role in relation to others around them in society.
3. develop and live by a system of values consistent with the values of society.
4. understand and improve their individual competencies.
5. develop physically to their individual optimum.
6. develop active inquiring minds.
7. feel accepted and wanted by contemporaries.
8. understand, accept, and make the most of individual limitations.
9. feel useful."

F. General Objectives for 4-H Club Work in Niagara County

Niagara County, New York, developed these objectives for 4-H Club work (Furnished by Arthur E. Durfee):

"In simple language, the 4-H Club program in

Niagara County offers young people these opportunities:

1. To acquire useful knowledge and skills that will be helpful to them all of their lives as homemakers, homeowners or plain citizens.
2. To recognize the worth and to gain respect for good hard work.
3. To 'own' something and to understand the 'pride of ownership' and satisfaction in producing high quality products through their own work and care.
4. To work together for the common good, instead of for their own selfish interests, and to learn the value of common interest, and accomplishment through united effort on a voluntary basis.
5. To learn to accept competition as a part of life and to win or lose as good sportsmen and without bragging or whining.
6. To learn how democracy works through their experience in local groups, in serving in positions of responsibility, and in sharing the interests of all, for the common good.
7. To learn to respect healthful living, wholesome recreation and purposeful use of leisure time.
8. To learn to get along with others, to make new friends, to work and play together.
9. To explore careers through vocational experiences made available by project work.
10. To gain respect for scientific research and to respect education and training.
11. To learn to work with their parents as a family and to develop mutual family interests that bring parents and children closer together.
12. To learn to respect leadership and to develop qualities of leadership in themselves through actual experience and example.
13. To learn to respect nature and to develop an understanding of conservation and the wise use of natural resources, and to participate in actual conservation experiences.
14. To be recognized as an individual and as a member of organized groups for "OUTSTANDING ACHIEVEMENT."

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